Value Creation in M&A transactions

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0. Introduction

As many writers, analyst or people related to finance say, Mergers & Acquisitions transactions are most of the times not profitable or they do not “create value”, making the acquirer’s shareholders lose money. Even it is estimated that “around 50% of mergers don’t achieve their business objectives […] according to several studies conducted over the past four decades” (Kumar, 2009).

This research paper tries, in first place, to understand and explain a bit more the process and the facts of M&A transactions, taking a deeper look at value creation, what it is and how it can be measured. So later, it will try, by analysing some past transactions in Europe, explain or conclude which factors are more important to succeed in this type of activities, as well as understand how this world is nowadays (volume of transactions, size of them, countries and industries of the companies, etc.).

Chapter I. Literature Review

As Bower (2001) said, “we know surprisingly Little about mergers and acquisitions, despite the buckets of ink spilled on the topic”. Indeed, the acquisition of one firm by another is one of the most controversial activities that corporate finance challenges daily, if not the most. Nevertheless, this research paper will try to explain as precise as possible these activities and their motivations to take place, as well as have a look at the past evolution of them. Later we will take a look at value creation, what it is, why it is important and how it can be measured, as this will be an important aspect for the management of any acquiring company. Finally, we will analyse the factors that can contribute these transactions to succeed or fail.

1. M&A process

1.1. Ecosystem

Mergers and acquisitions (M&A) transactions refer to all type of financial transactions that involve the consolidation of companies or assets. These transactions include mergers, acquisitions, consolidations, tender offers, purchase of assets and management acquisitions, but in all cases, two companies must be involved. The two transactions more common and more analysed worldwide, and therefore the name of M&A, are mergers and acquisitions.

As Ross, Westerfield and Jordan (2019) established, from a legal point of view, when a firm wants to acquire another one has up to three basic procedures: merger or consolidation, acquisition of stocks or acquisition of assets. Firstly, both merger and consolidation occur when there is a complete absorption between companies but the difference is that, on one hand, in a merger the resulting firm is the acquirer and the acquired firm ceases to exist, and, on the other hand, a in a consolidation process both companies cease to exist and a new firm is created. Secondly, when an acquisition is done through purchasing stocks of the other firm, by exchanging them with cash, shares or other securities, it can be done, or at least started, by a private offer between managements or with a public offer called tender offer. Thirdly, the last possibility that an acquirer has is to purchase the target's assets, thus it will become propriety of the acquirer but without disappearing.

As many financial writers and analysts do, as Ross et al. (2019) present, it is typically to classify the different acquisition or merger transactions into three different types: horizontal acquisition, vertical acquisition and conglomerate acquisition. The first type includes all acquisitions between companies of the same industry; the second type involves firms from different industries or firms at different steps of the production process; and finally, the conglomerate acquisitions concern unrelated businesses, even though it is not as common as the two priors.

1.2. Motivation of the different M&A deals

Although the M&A literature pays a lot of attention to the post-transaction consequences and less to what are the factors that influence or motivate the initiative of an acquisition or a merge (Peng and Fang, 2009), those factors are not unique and there are numerous approaches to analyse them.

For Dube and Glascock (2006), there are indeed many reasons that motivate those transactions, such as synergies, product or geographic diversification, growth, increased market power, control of scarce resources, or market discipline. All of them are strategic business and corporate objectives of the acquirer, who reaches the acquired firm, but they are not mutually exclusive, and it may be impossible to separate the effects of each of them (Coffee, Lowenstein and Rose-Ackerman, 1988).

Marsh (2009) presents the four most popular theories used to explain M&A's motivation: cost-transaction economics, RBV (Resource Based View), Business Behaviour Theory and Agency Theory. This involves two different levels of analysis: the first two theories describe the motives for acquisition at the enterprise level, while the second two describe them at the manager level. Marsh combines the bases of the different theories to address the acquisition decision itself: certain characteristics at the manager level strongly influence the enterprise's motives for the acquisition.

As Bower (2001) mentioned,

> "Acquisitions occur for five reasons: to deal with overcapacity through consolidation in mature industries; to roll-up competitors in geographically fragmented industries; to extend into new products or markets; as a substitute for R&D; and to exploit eroding industry boundaries by inventing an industry".

In this research paper, and with all the literature review done, I think it is reliable to emphasise up to six basic and immediate reasons that motivate, or should motivate, pretty much all M&A transactions, many of which have been just mentioned. It is important to highlight, as prior cited, that they are not exclusive, and the acquirer might have more than one objective. Nowadays, those six reasons could be: synergies, diversification, strategic realignment, purchase of undervalued assets, tax considerations and/or gaining market power.

1.2.1. Synergies

Possibly synergies are the most commonly cited motivation for two companies to merge, but the concept has a very broad meaning. Synergies are generally understood to happen when two companies can generate more value for their respective shareholders by operating together than separately. Mellen and Evans (2010) define it as "a business combination that makes two plus two equal to five". Moreover, according to DePamphilis (2001), two types of synergies can be distinguished, fundamentally, operational and financial.

On one hand, operational synergies are achieved through economies of scale and economies of scope. However, the benefit is not automatic, but its effectiveness will depend on the talent and skill of managers. Firstly, economies of scale consist of the distribution of fixed costs over a higher total production, so that the fixed unit cost will decrease as total production increases. Therefore, the higher the company's fixed costs, the major reason for a merger or acquisition for economies of scale (DePamphilis, 2001). Secondly, synergies can also come from economies of scope, which consist of producing more, with the same resources, through the efficient use of those that are available (DePamphilis, 2001).

On the other hand, the financial synergies refer to the impact of the operation on the acquirer within the scope of its cost of capital. The general financial theory is that if the cash flows of the participating entities are not correlated, the cost of capital should decrease, since, as Trautwein (1990) points out, the systematic risk of the investment portfolio will decrease. This type of synergies can also emanate from two sources, financial economies of scale and a better matching of opportunities with internally generated funds. The first way is based on the idea that larger companies should have a greater facility to issue debt, since the fixed issue costs will be spread over a larger amount. The same idea could be applied to share capital: the larger a company is, the easier it will be to raise capital (DePamphilis, 2001).

The second way to obtain financial synergies is to combine a firm with an excess of cash, with a cash generation coefficient that is insufficient, which would mean a reduction in the cost of debt (Nielsen and Melicher, 1973). A mature company, with moderate growth, will produce a cash flow far in excess of its investment opportunities, in most cases. However, a developing company, or more so a start-up company, will need more investment and will not generate as much cash. In addition, the former will have a considerably lower financing cost than the latter. Therefore, if they were combined, the joint risk would be reduced and transaction costs would be saved, since the allocation of resources would be infinitely more efficient, and all existing opportunities would be taken advantage of.

Other classifications, such as those made by Trautwein (1990) or Dutodoir et al. (2014), distinguish a third group of synergies, the management ones, which are those that are materialized when the executives of the acquiring entity have greater planning and monitoring capacities than the executives of the other entities. Thus, they acquire at a lower price or with better conditions, which translates into greater profitability for their shareholders, and therefore greater value.

Finally, mention that before any M&A transaction, the management of the acquirer should plan the synergies they hope to obtain through the transaction and classify them as expected, manageable and challenging. This classification will organise, more or less, the probability of acquiring each of the expected synergies.

1.2.2. Diversification

Diversification refers to a company's decision to move out of its main geographic or product markets, and business lines, and move into others. According to DePamphilis (2001), there are two arguments that justify diversifying a company, reducing shareholder risk and taking advantage of opportunities offered by sectors with higher growth potential than the markets in which the company is currently at.

Through diversification, the company will achieve a more stable income, as it will not depend on a single market. The lower the correlation between entities' cash flows, the greater the reduction in investment volatility. The direct consequence will be greater confidence in the company on the part of investors and financial institutions, which will mean a reduction in the cost of capital. In the second scenario, if the company's traditional market has weak growth rates and the company has excess cash, which is common in mature markets, companies will try to capture all growth opportunities, either by entering different markets or by launching new products in their market.

Two companies with a presence in radically different markets can be integrated in pursuit of this objective, here is where M&A transactions play their role. The problem that diversification can entail is the difficulty in finding synergies, as the businesses will probably have no relationship between them.

1.2.3. Strategic realignment

Business environments change rapidly in many aspects, but the legal and technological dimensions are especially important, because they are factors that can lead a company to lose the right to act in a market due to a regulatory change or to be far behind its competitors, if it is not able to adapt to technological advances. At the same time can lead a company to lead a market if it adapts quickly. In this sense, M&A can help companies adapt extremely quickly to these changes in the environment. In fact, this was one of the factors that drove the wave of mergers in the United States in the 1990s.

Firstly, during the last quarter of the twentieth century and the dawn of the twenty-first, we can appreciate a liberalizing tendency, with a regulation that lays the foundations of economic activity, but leaves room for action to the subjects. According to authors such as Jensen (1993), Mitchell and Mulherein (1996) or Boone and Mulherein (2007), the less regulated markets favour acquisitions, since a more lax regulation, that does not impose an infinite number of barriers, favours competition in the market, so that companies will use these schemes to position themselves strategically in the market.

Current regulation, although it safeguards free competition in the market, is restrictive and a barrier to mergers in some cases. For example, when Pfizer put its baby food line on the market in 2002, Nestlé's interest was counterbalanced by the US competition authorities' demand to sell part of the business in order not to take over the entire market.

Secondly, technological change is a clear reason for M&A transactions, as companies must adapt to the environment and try to reach all their customers, so as not to lose opportunities or give advantages to their competitors, and through a merger or acquisition a company can overcome with new products, new markets and competitors. For example, the industrial revolution and railways led to a greater interrelation of markets, and the areas in which each company competed were expanded, due to greater ease and speed in transporting goods and people (DePamphilis, 2001). Since changes often occur quickly, external growth is used as a more viral form of adaptation, rather than internal growth, which takes time to develop and implement.

This reason is frequently used nowadays, where technological changes are very rapid, as for example Facebook taking over WhatsApp to maintain its leadership in mobile application communications and social networks, or Microsoft that acquired Skype due to the technological revolution that it meant, instead of developing its own software, which they estimated would mean a higher cost and more time.

In line with this strategy, start-ups play an important role in today’s world, where there are a large number of them, as they can innovate and adapt to changes quite easily and quickly in most cases, due to their size. Therefore, large companies, with a very strict bureaucracy and less room for manoeuvre, look at them as a purchase objective once they have implemented a successful technology. As already said, it can be more interesting to buy a technology already developed and with some success, instead of investing time and resources, especially given the shorter life cycle of the products and the high competition currently existing. In addition, these acquisitions may also aim to keep out of reach of competitors technologies with which they could displace their product.

1.2.4. Purchase of undervalued assets

When a company wants to expand and grow, it can develop technology and invest in internal growth or opt for external growth, acquiring a company to incorporate its assets. The second option is especially interesting when the company is undervalued, meaning when the acquisition price of the company is lower than the replacement cost of all its assets, individually considered. In this situation, the ratio-q, developed by DePamphilis (2001) for this purpose, will be less than 1 (ratio-q < 1). Therefore, buying undervalued assets is a quick and easy way to make a profit, but the difficulty lies in identifying undervalued companies and, above all, studying them in order to detect possible contingencies that may arise and, ultimately, represent a high cost for the acquiring entity.

1.2.5. Tax considerations

Although the tax issue related to any M&A transaction is complex and broad, it is necessary to briefly discuss, on the one hand, the tax reasons that may motivate a merger or acquisition and, on the other hand, the tax issues that must be taken into account when carrying out the operation, which will conclusively influence the decision whether or not to carry it out.

In the first place, the fundamental tax reason for undertaking an operation of this type is to take advantage of the tax credits that the acquired entity has in its balance sheet, due to the losses obtained during previous years. These credits will allow savings in the payment of taxes on the benefit of the acquirer or the resulting entity (Devos et al, 2008).

In second place, depending on the accounting method used to account for the acquisition, tax benefits may arise from the operation. If the acquirer's assets are revalued, depreciations and amortisations also change, with the resulting tax savings. Therefore, when considering whether or not to make a merger or acquisition, the way in which the operation is structured will surely be of capital importance, from a tax point of view.

When acquiring, the most common is the use of an acquisition vehicle, which could be a local holding company, the foreign parent, a non-resident intermediary holding company, or a local subsidiary. Other less common vehicles, such as joint ventures, could also be used. The other big decision is how to finance the acquisition, with local or foreign debt, capital or hybrid instruments. The main advantage of debt is the possible deductibility of interest and commission expenses. However, if capital is issued to finance the operation, neither the issuance costs nor the subsequent distribution of dividends will be deductible. However, in order to take advantage of both the tax credits and all the possibilities of deduction, it will be necessary for the resulting entity to have sufficient profits for the next four years, otherwise it would lose those rights.

On the seller's side, a structure will be sought that allows the target shareholders to defer, over several fiscal years, the profits obtained from the sale, so that they can distribute the tax payment and reduce it as much as possible. If the transaction is not tax-free, as a general rule, the seller will ask the buyer for compensation for payment of transaction taxes.

1.2.6. Gaining market power

Finally, companies always try to improve their position in the market, since the greater their presence and market share, the better their competitive situation will be and the greater their profitability will be to their shareholders. Therefore, the extreme, most comfortable and simple situation for a company is the monopoly, because they will be able to set prices and levels of supply and will not have to worry about attracting customers, or what their competitors do, because they would be the only bidders in the market. However, in many countries this would be an ideal situation, as Governments regulate the commerce prohibiting monopolies in order to assure free competition.

Devos et al. (2008) point out that, when we talk about market power, we can apply it to the company's suppliers or its customers. Therefore through horizontal integrations in M&A transactions, greater power will be achieved for the acquiring company over the suppliers and customers at the same time. On one hand, by eliminating competitors, suppliers will have one less customer to supply, thereby strengthening the position of the acquiring entity. While on the other hand, customers will have one less entity to turn to in order to meet their needs.

1.3. Position of the so-called "emerging giants"

Several recent studies analyse the position and the strategy of the so-called "emerging giants", which basically are the biggest or more important companies from developing countries such as India, China, Malaysia, South Africa or Russia. As for example the Harvard Business Review, which published an article from Nirmalya Kumar (2009), among others.

It is important to study and understand their position and strategic view for the M&A process, as it is quite different from the western companies of the developed countries.

On one hand, despite all the motivations that lead to mergers in developed countries as we saw previously, these "Western companies" search an improve in their efficiency and growth, trying to beneficiate from synergies in order to reduce costs (Kumar, 2009). On the other hand, emerging giants from developing countries are beyond the period when they used M&A mainly to chase growth and, therefore, they lacked the knowledge and tools to stay efficient and be competitive with other major players. Nowadays they are using M&A transactions to "obtain competencies, technology and knowledge" while having a "clear long-term vision […] willing to wait for their takeover to pay off", in contrast with the short-term objectives in developed countries (Kumar, 2009). The same Kumar stated that those emerging giants are "using M&A as their main globalization strategy and generating more value from takeovers than their counterparts from developed nations".

Therefore, even if it is possible that is not an easy task, this strategy with takeovers should be further analysed and applied in developed countries, trying to focus on long-term objectives and make those transactions profitable on the long run. Also, it is important that they keep on this direction in the developing countries in order to keep competitivity worldwide.

As said, it is not an easy task, and Jullens (2013) well relates that developing capabilities is a slow process and that those capabilities should be acquired in four stages: "1. Seize the moment; 2. Build strength; 3. Scale and consolidate; 4. Move up and out".

1.4. Historic overview

The worldwide market of acquisitions is highly active with an average transaction value of $1 trillion per year (Berk et al., 2014). In fact, this high volumes have been happening for many years now, leading to the possibility of characterizing the market by a concentration of merger waves, which basically are periods with intensive activity, followed by periods with sporadic activity. Although when the merger waves are mentioned it usually refers to M&A activities at the aggregate level, it is beginning to talk about waves of M&A activities at the sectorial level (as for example Boone and Mulherin, 2007; among others).

1.4.1. Merger Waves

As McNamara (2008) defines, acquisition waves are defined as a period of about six years where the peak year of acquisition activity doubles the base year, and where the subsequent decline is more than 50%. Therefore, the waves imply that operations induce more operations, resulting in a domino effect on M&A activities and thus increasing market concentration.

Operations tend to occur in periods of economic recovery (following an economic downturn, energy crisis, or market collapse) and may be conditioned by regulatory changes as well as influenced by technological or industrial changes (Martynova and Renneboog, 2008). Although each wave is characterized by different types of reasons and motives, there can be found a number of common factors and match with periods of rapid credit expansion that are accompanied by stock market booms, while correlating with bull markets. At the end, M&A activities are often interrupted by stock market crashes and the subsequent period of economic recession.

The differences in patterns and their results over the decades can be attributed to the heterogeneity of the triggers of each wave. Emphasizing that the first operations in each wave is motivated by an abrupt change in the industry (Gregoriou and Renneboog, 2007).

Figure 1 shows the volume (in this case percentage) of public companies taken over since 1926, exposing that the greatest periods of M&A activities were in the 1960s, 80s, 90s and 2000s. Firstly, the high activity in the 1960s is known as the "conglomerate wave" as firms were acquiring unrelated businesses, as the type of acquisition already explained in this research paper. Secondly, in the 1980s there was the "bust-up" (or hostile) takeover wave, in which the acquirer searched for underperforming firms to later sell all of its individual business units separately to make a profit. Later, everything refined to the "strategic" or "global" wave, in the 90s, as the merged companies had related businesses or activities and the ultimate goal of the acquisitions was to create strong and competitive firms. Finally, at the end of 2004 a new wave escalated marked by the consolidation of the telecommunications and software industry, among others.

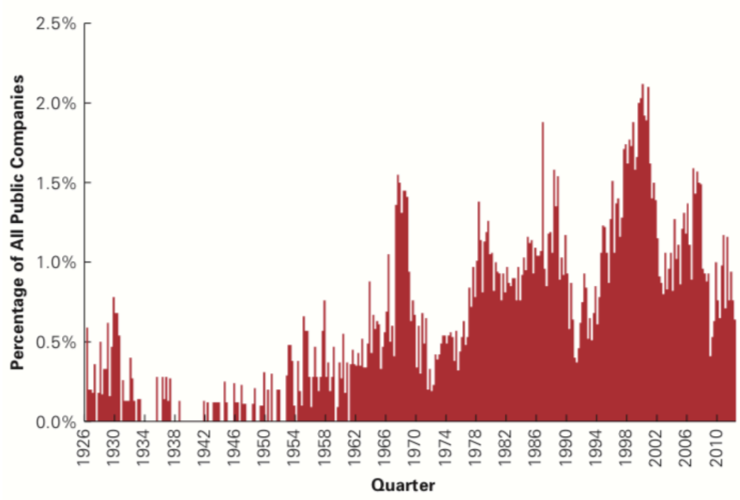

Figure 1. Percentage of public companies taken over each quarter, 1962-2012.

Source: Calculations of Berk et al. (2014), based on Center for Research in Securities Prices data.

Several authors confirm the behaviour of cycles and merger waves as has been exposed: Lambrecht (2004) indicates that waves typically coincide with periods of economic expansion and slow down during recessions and also analyses the timing of mergers motivated by economic shocks, demonstrating that companies have clear incentives to merge in periods of economic expansion; Dube and Glascock (2006) say that it has long been recognized (quoting Reid, 1968) that M&A are highly correlated with general economic activity; Morellec and Zhdanov (2008) incorporate competition and imperfect information to determine the terms and timing of operations, through the resolution of solving option exercise games between bidders and targets.

With that in mind, the grouping of transactions also responds to other corporate motivations: the anticipation of potential mergers after the regime change creates incentives to engage in additional mergers (Gorton, Kanh and Rosen, 2009). The race to increase company size via mergers may be the result of defensive or positioning reasons. According to these authors, defensive mergers take place because when managers are sufficiently concerned with maintaining control, they want to acquire other companies to avoid being acquired themselves. This defensive position is simple as by growing through acquisitions, a company is less likely to be acquired by becoming older than some of its rivals, so this later makes others more vulnerable as targets, which induces them to undertake defensive acquisitions in turn. At some point this causes the "eat-or-be-eaten" scenario, where unprofitable defensive acquisitions are ahead of some or all profitable acquisitions.

1.4.2. First mover advantage theory

Lieberman and Montgomery (1988) introduced the "first mover advantage theory" in the M&A activity, based on the asymmetry of information, in which a pioneer is able to capitalize his best information to identify and act to get a position of advantage over their equivalents. This advantage has three basically origins: technological leadership, right of priority of assets and the generation of buyer switching costs. Later, McNamara, Haleblain, and Dykes (2008) confirm this theory, by virtue of which the acquirer can benefit from early response transactions but may suffer from a delayed response as a bandwagon. In fact, these first acquisitions not only have better results or better returns than the later ones, but also on average make a profit. Thus, the market penalises the followers, those who come after the pioneers or early movers, by being the ones that get the worst returns on the M&A deals.

Analysing a little further this theory, it is not as straight forward as it seems, as the good returns of the pioneers is not just because of the "early move" , as experience and the stability of the market play an important role as well, while the bad returns of the followers can be more or less accentuated depending on this stability of the market. So early movements have more positive results in stable environments and followers suffer more than in dynamic environments. Although not always entering first is an advantage (Lieberman and Montgomery, 1998), as for example when the speed of technological innovations allows later entrants to exploit market opportunities more cost-effectively by imitating rather than innovating.

As mentioned, the ability of early movers to achieve a leadership position through M&A may be greater in stable markets (Schmalensee, 2000 quoted by McNamara, Haleblain and Dykes, 2008). Furthermore, experience is also important, because infrequent buyers are more exposed both to the benefits of an early movement and to suffering the consequences of being a follower. In all cases the tactics used by the acquirer influence the trend of results within the same wave, as well as the form of payment.

The research of McNamara et al. (2008), show that companies that undertake acquisitions at the beginning of the cycle achieve better results for their shareholders, on average, than those that act towards the end of the cycle. Early movers have access to the largest number of potential targets (Peng and Fang, 2009), allowing acquirers to "pick from the litter", and gradually it will be more difficult for companies to find the appropriate target. Besides, these early acquisitions also involve smaller targets (Goel and Thakor, 2010) and generate more profits for management teams than the later ones in the same wave. Therefore, as already mentioned, this research attributes good timing as the success to M&A deals: acquirers at the beginning of a wave see their shares grow by more than 4% over what would be expected, based on past results and market trends, during the three weeks following the announcement of the M&A (see Figure 2).

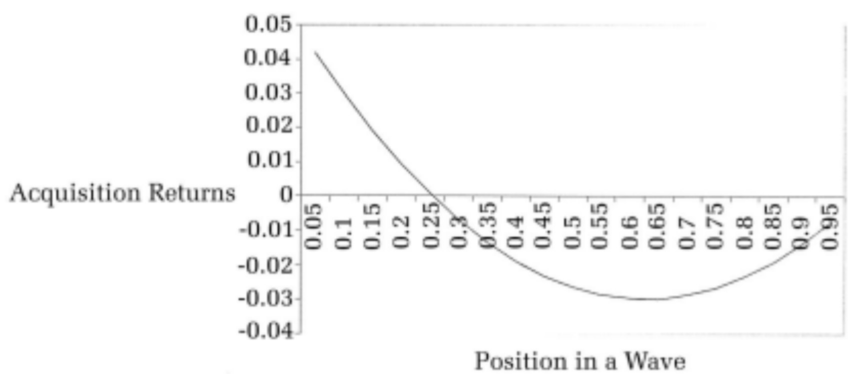

Figure 2. Curvilinear effects on the acquisition returns.

Source: McNamara, Haleblain and Dykes (2008).

2. Value creation fundamentals

2.1. Theory of Value Creation

As Trautwein (1990) pointed out, M&As seek the transfer of wealth and the generation of a benefit for the intervening entities and their shareholders. Moreover, through the value generated, it is possible to measure the long-term performance of the company, taking into account the interests of all stakeholders and not just those interests of the shareholders. Nevertheless, it is true that value is a variable that is difficult to quantify, as we will see further in this research paper, and the Theory of Value Creation entails the risk of generating bubbles or crises, but these can hardly be avoided by means of any other model.

At this point, this theory enters in play as a main role, and it is based on the premise that value is the key factor and fundamental indicator of companies' performance, understanding value as the one that all stakeholders receive, and not only the shareholders. Koller, Goedhart and Wessels (2010), argue that value is the fundamental measurement dimension in market economies and is therefore used to assess and judge companies.

This theory is based on the premise that companies generate value by investing the capital they obtain from their investors, in order to generate future cash flows at a rate of return higher than the cost of capital. The faster the revenue generation, and the more attractive the rate of return, the more value will be generated. For this process to be sustainable over time, the company must find a competitive advantage that lasts and can be defended against its competitors (Koller et al., 2010).

Still analysing the work of Koller et al. (2010), "companies dedicated to value creation are healthier and build stronger economies, higher living standards, and more opportunities for individuals". Their work emphasises again on the debate between stakeholder versus shareholder, pointing out that "pursuing shareholder value [as many companies do] does not mean that other stakeholders suffer", as they analyse the employment stakeholder of companies. They demonstrate that "the United States and European companies that created the most shareholder value in the past 15 years have shown healthier employment growth". In more detail, as shown in Figure 3, "companies with the highest total returns to shareholders (TRS) also had the largest increase in employment".

Figure 3. Correlation between TRS and employment growth.

Source: Koller, Goedhart and Wessels (2010).

In addition, the customers of those companies are more satisfied, and their employees have a better perception of the treatment received and a greater sense of corporate responsibility than their rivals. As an additional advantage, competition for value creation forces both human capital and natural resources to be used efficiently, which will lead to an improvement in the company's competitiveness.

It should not be forgotten that the main reason why a shareholder invests in a company is to make a profit, to obtain economic value through capital gains and dividends. If the company does not generate value for the shareholder, its shares and participations will be less attractive for investors. The absence of capital in the company will mean its death in the markets. Therefore, it is essential to know how and how much value is created in companies.

Companies provide value to their shareholders by investing at the present time to obtain a return in the future. The amount of value generated is the difference between the returns obtained and the cost of the investment, taking into account the fluctuation in the value of money over time and the risk involved in the investment. Therefore, the value generated by a company will ultimately depend on the return on investment, revenue growth and the long-term sustainability of both.

Any operation that makes an entity grow, whether in size, turnover or market share, implies value creation. However, the option with the highest growth does not necessarily have to be the one that provides the greatest value creation. Pay attention to the valid theory of the same Koller et al. (2010), among many other corporate related people, which establishes that the investment rate is equal to the quotient between growth and return on investment (both in percentage terms), just as follows:

Investment rate = Growth Rate (%) ÷ Return on New Invested Capital (%)

2.2. Main factors of success and failure

Traditionally, the factors that are considered as success or failure for M&A transactions were classified between the two stages of pre- and post-acquisition operations. However, recent literature has dismissed this traditional classification arguing that these factors are transversal to the stages, so although we refer to the stage in which each factor is identified in each study, we do not include this classification in the structure of the factors.

> "While critical success factors can be apportioned to specific phases in the M&A process, and the links between them identified, of key importance is the ability of firms to manage the transition from pre-acquisition to post-acquisition phase." (Gomes, Angwin, Weber and Tarba, 2013)

The same authors (Gomes et al., 2013) state that deepening the relationship between key success or failure factors in the pre-acquisition phase can improve the understanding of which combinations of factors may have more explanatory power over the results of operations. They ensure that potential combinations of factors have not been sufficiently studied by the literature, and the same thing happens with post-acquisition Researchers focus attention on pre-acquisition variables forgetting that it is in the post-acquisition phase where value is generated, and there are few studies that examine the interrelations between the different key factors in this phase. Their study on the different factors conclude with a schematization of the key factors in the various stages and the relationships between them, as shown in Figure 4.

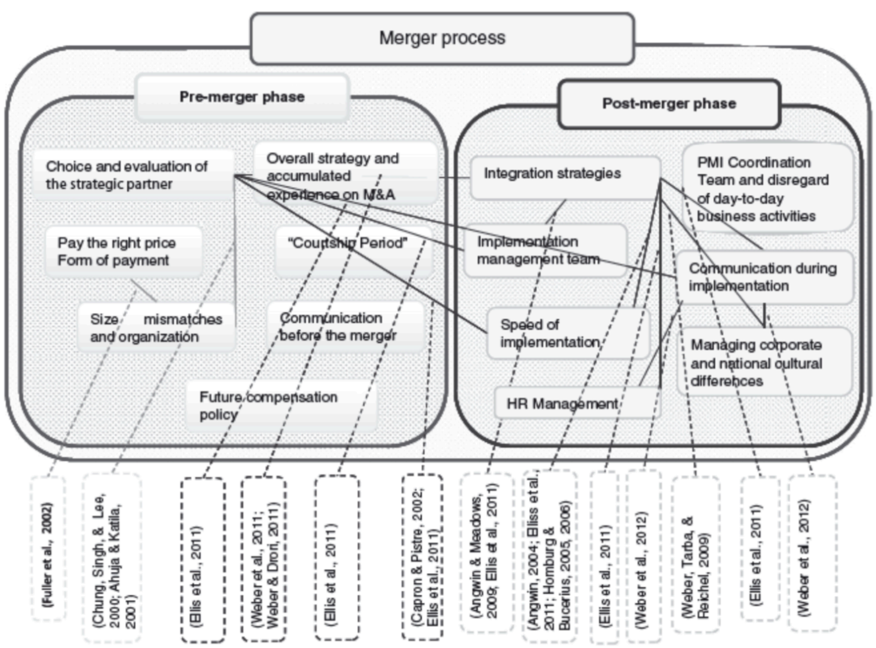

Figure 4. Pre- and post-acquisition success factors and studies of its interrelationships.

Source: Gomes et al., 2013.

Gomes et al. (2013) advocate the connection between critical success factors within each phase and throughout the phases themselves and that discussion of the value of each factor can be enhanced by considering how it can influence and be influenced by other critical success variables both within and throughout the phases of the M&A process.

Now I will quickly analyse those factors, classifying them into two main groups: hard factors, which can be measured and quantifiable and tangible, and soft factors, which are more difficult to quantify insofar as they are perceptions, motivations and feelings.

2.2.1. Hard factors

There are several hard factors that determine the operations, apart from the most recurrent that we deal with in the following epigraphs, later we analyse those specific ones on which some authors focus.

a) Target company selection

Once the need for M&A has been established, the first step for the acquirer (Gomes et al., 2013) must be the choice of a strategic partner in terms of its strengths and weaknesses, future investments, quality of the target management team and the assessment of barriers including cultural differences and human resource implications, such as executive turnover, all through a diligent process. The choice has to be made in terms of strategic fit and organisational fit, as this fit is conducive to good results for the operation. Companies and their advisors should do a better job of selecting candidates, while avoiding falling in love with the target company (Lynch and Lind, 2006). Wang and Zajac (2007) contribute that the similarity of resources and complementarity combined with relational and socio-specific capacities make the choice of certain partners more likely.

Thus, a determining factor in the choice of target is the complementarity of the resources of acquirer and acquired, that King et al. (2004) reveal, identifying that the fact that the resources are complementary implies that there is a positive interaction between the resources of both companies. To the extent that post-acquisition results require the combination of the resources of both, if these are complementary, they can have a multiplicative effect that can be a framework for explaining synergies.

Kim and Finkelstein (2009) raise the effect of complementarities in product strategy and geographic markets on M&A results and explicitly consider the role of the company's strategic profile in the potential value it can gain via complementarities. Although it is possible to determine acquisition in terms of the degree of similarity between industries, a deeper survey of the degree of complementarity in product strategies is also informative, for example recent studies on diversification show that intra-industry diversification is advantageous precisely because the unique industry context facilitates sharing of resources within and across product lines.

What is more, similarity and complementarity should not be seen as theories in dispute over the results of M&A. The results of operations are a function of the creation of synergies of both similarity and complementarity (Wang and Zajac, 2007). These authors put it in terms of "how similar should the two companies be?". And they conclude that the key is whether the assets, resources or strategies of both companies are mutually reinforcing when they can potentially be combined or reconfigured to create value. A value that did not exist in either of the two original entities and this does not necessarily apply only to two companies within the same sector, but also applies between connected sectors and not only product but also in other cases, such as functional complementarity (i.e. between research and distribution).

About the relative position of the companies that combine, according to O'Connor (2006) buyers in their search for competitive strengths typically look for companies with a strong position in their markets and high barriers to entry. When they do so look for fit, they generally analyse whether the two companies are aligned and where they complement each other. The factors to consider in the target search are growth rates, profitability, market capitalization, product line, distribution channels, key competencies, productivity ratios, management philosophy and size and type of human resources. During this process the focus is normally on the global strategic fit, leaving other factors to the risk of closing the operation and integration, which can lead to costly mistakes.

Hassan et al. (2015) emphasize on the importance of target evaluation, which is more professional if carried out by an independent third party. It is important that the evaluation parameters are adequate to ensure a consistent evaluation process, in addition to the fact that the evaluation of results has to be sufficiently defined both during selection and during evaluation. In any case, the evaluation of the target is related to the rest of the process, including the integration, as it must take into account the planned post-closure interventions and the integration strategy that must be a function of the objective of the acquisition strategy (Lemieux and Banks, 2007) and the results of the due diligence, otherwise an acquirer may be paying an excessive premium for a certain target.

b) Size matters

Several studies such as the ones of Homberg, Rost and Osterloh (2009) or Alexandridis, Fuller, Terhaar and Travlos (2013) refer to size, both in absolute terms and in terms of comparison between acquirer and target in the ability to exploit each type of synergy, but the issue of size is recurrent throughout the literature in different approaches. We will analyse three of those different approaches: the size of the operation, the size of the company and the relative size between acquirer and acquired.

Firstly, the size of the transaction matters, as small acquisitions can be considered "incorporations" that can take place without a significant change in the acquiring organization and do not raise the same kind of challenges or possibilities in either the acquisition or integration process as the large acquisitions. Therefore, some authors, as Nogeste (2010), consider that they should not be considered equal in terms of dynamics and requirements. On the other hand, Moeller, Schlingemann, and Stulz (2004) document that the focus on large operations can provide an incomplete picture of the impact of acquisitions on shareholder wealth, as large acquisitions tend to be less profitable than smaller ones.

Secondly, there is quite a lot of literature review on the implications of the size of the companies on the creation of value through M&A transactions. For example, Buehler, Kaiser and Jaeger (2006) conclude that "big is better but not always" and that ultimately "large firms are more likely to merge than small firms". In the same line, Handy (1998) establishes that:

> "The size of both business and life can mean lack of focus, too much complexity, and in the end too broad to be controllable. We need to know when big is big enough".

Other authors like Homberg et al. (2009) proclaim that the absolute size of the acquirer is extremely important, since smaller acquirers are more likely to capitalise an M&A, because they have more growth path, demonstrating that growth is naturally limited. And in this line, Park and Jang (2011) maintain that size also has an impact on the growth of the post-F&A company. Finally, Alexandridis et al. (2013) record the following conclusions:

- Large target acquisitions are associated with significantly lower premiums.
- Large transactions are usually not associated with overpayments or high premiums, related to the complexity of the bids themselves.
- Despite lower premiums and the possibility of small overpayments, the acquisition of large targets destroys more value for acquirers.

Thirdly, in terms of relative size between acquirer and target, the literature preaches that similarity in terms of size of the organization plays an important role in the choice of suitable partners (Gomes et al., 2013). However, the evidence, also according to these authors, suggests that the purchase of smaller companies in relation to the acquirer can lead to sub-optimal results, and vice versa, the purchase of very large companies in relation to the acquirer can also lead to poor results (Moeller et al., 2004). The reasons, according to (Gomes et al., 2013) may be, in the first case that the post-acquisition tends to be ignored or attract too much attention in the eyes of managers of other parts of the acquiring entity, and in the second there is interference in the struggle for political power when each organization fights for dominance.

On their behalf, Gorton, Kahl and Rosen (2009) state that the relative size of companies within an industry/sector is decisive for the propensity and profitability of operations in the following terms: first, M&A are more profitable in industries where larger companies are more profitable than other companies; second, in industries with more medium-sized companies it is more likely that M&A will occur. The same authors understand that the profitability of acquisitions tends to decrease with the size of the acquirer, because large acquirers tend to pay premium while small acquirers tend to engage only in profitable acquisitions. Thus, this creates potential synergies, and makes future mergers more likely to create value, with larger targets being more attractive partners given economies of scale. As a consequence, the size of the company is an important determinant for target determination.

People assume that a company can only buy a smaller one, but in reality there are reasons why a company rarely buys a larger one, because such an operation is more difficult to finance, raising funds and adding debt can increase the likelihood of financial problems and its managers would be more likely to lose their jobs (Gilson, 1989) and acquire it with the issuance of new shares would dilute the ownership of the acquirer in the combined company and perhaps lead to loss of control. These difficulties in acquiring larger companies may explain why in most M&A the acquirer is considerably larger than the target and why the likelihood of being a target decreases as the company increases in size.

c) Synergies

The synergies that are achieved in an merger or acquisition transaction are very broad and diverse, as already seen and analysed earlier in this research paper as the motivations that drive this type of transactions. But it is important to mention them again at this point, since the success of M&As is determined by the degree to which synergies are achieved. Therefore, it will be important to analyse weather the synergies are achieved and try to keep realistic when planning the acquisition, as for shareholders and managers will be important to achieve those that are expected.

d) Time factor

There are mentions on impacts of the time factor in several senses throughout the literature, and we will try to analyse some of them, from the different points of view from some authors.

Firstly, in terms of what should be the time window for the evaluation of M&A results, Soongswang (2009) believes that “the larger the event window, the greater the increase in the amount of abnormal returns". One explanation for why the worldwide success rate is low is that the time period in which results are measured is restricted to a short term, usually two years, which may be insufficient time for employees and managers of companies involved in M&A to adjust post-acquisition changes (Quah and Young, 2005) .Therefore, it is suggested to take a period of at least 7 years, as the longer the time window considered for the evaluation of the results, the more time the market has to correct any initial error in the evaluation of the acquirer, in addition to introducing more noise in the estimates (Mueller and Yurtoglu, 2007).

In this sense, Comeau-Kirschner (2000) states that it takes approximately two years to achieve at least 15% of the total profit expected from the operation. After two years most of the problems have to be solved, the strategic plan be in place and the companies start to show benefits. In fact, Bert, MacDonald and Herd (2003) further adjust the time window by stating that 70-85% of synergies are achieved during the first 12 months after closing, and also that the companies that meet or exceed analysts' expectations in the first two years are the ones most likely to improve shareholder profitability.

Secondly, as for the speed of integration, in terms quoted by Angwin (2004):

> “Speed has become the new mantra in business promising advantage, prosperity and success. It is now de rigeur in the domain of Mergers and Acquisitions (M&A) with a rising tide of practitioners and consultants

> extolling the virtues of acting rapidly post-deal and the first 100 days, as critical for acquisition success."

This message has permeated M&A management in the form of a call for faster integration and a focus on the first critical days (Angwin, 2004), however this author warns of the risks of a non-critical acceptance of the benefits of speed in post-acquisition integration and, in this sense, considers the optimal speed of the change process in terms of integration times as part of the integration strategy of the acquirer.

Authors such as Nikandrou, Papalexandris and Bourantas (2000) argue that the immediate post-acquisition period is the right time to implement the changes, because employees wait for it while they evaluate the intentions of the new management team. In the meantime, there are those who suggest a period of adjustment and knowledge before undertaking major changes (quoted Schweiger et al., 1993) but there is no empirical evidence in favour of any of these arguments.

The speed of change must also be considered in cultural integration (Papadakis, 2005), while determining the appropriate pace of change and how much change people can absorb, answering questions about how integration can be accelerated without destabilizing the system.

Another element affected by the timing of the operation is, according to Angwin himself, the reduction in the uncertainty time of the workforce, which reduces the exponential effect that rumours have and also reduces the time available for the competitor to react to the new organization. However, the relationship between speed and success may not be as direct as it seems, so the first 100 days may not have such predictive power. In any case there are benefits and harms associated with the speed of integration that can affect the success of M&A.

Thirdly, as regards the time before the operation, Lambrecht (2004) argues that high costs and increased market uncertainty tend to delay mergers, since market power strengthens the incentive to merge and accelerates merger activity.

Finally, in terms of proactive candidate search, Cording, Christmann and King (2008) recognise the need for speed to respond to unexpected opportunities and recommend broad and proactive searches, which can be prolonged over long periods of time. Although all time references are a function of the economic moment and the market situation and undoubtedly evolve over time, so these quotations are only valid as an example.

e) Leverage and liquidity

Excess debt is considered another factor, which can act as a protective shield for the target company because it limits the path of possible M&A (Hege and Hennessy, 2010). In response to the risk of being acquired, managers may leverage the target to increase the value of the company, leading to a "disciplinary" purchase (Novaes, 2002). As already anticipated (Safieddine and Titman, 1999), high levels of leverage decrease the probability of being acquired because it commits the management team of the target to make the improvements that a potential buyer would have had to make, specifically the companies that have increased their leverage more after a failed purchase reduce their levels of investment, sale of assets, employment, increase focus and increase their operating cash flows. The quotes of the targets with increased leverage improve the benchmark over the next five years, which means that investors initially underestimate up to which values these companies were improved.

Jandik and Makhija (2005) confirm that shareholders of more leveraged targets achieve better results and operations involving highly leveraged targets tend to be more complex in terms of time, more likely to be associated with multiple bidders and greater price revision of the target's shares. Target leverage will affect not only the earnings of its shareholders, but also those of the M&A operation and suggests that this type of purchases is undertaken by acquirers with greater ability to generate profits.

Later, Basu, Dastidar and Chawla (2008) indicate that target companies in general have greater liquidity, growth and size on the one hand and less risk, leverage, profitability and operational efficiency on the other, supporting the theory that purchases are a mechanism to improve market share, synergies through economies of scale, reduction in the cost of capital and the increase in debt capacity among other factors.

f) Payment method

An acquisition can be paid for in cash, shares or a combination of both cash and shares, although in some circumstances the acquirer may also issue debt and use other formulas.

According to Bruner (2004), the literature shows that different methods of payment produce profound differences in results: being the operations in cash those that have positive returns and those that are in negative actions results. Under Bruner's own terms, a transaction will be paid in cash if the acquirer believes his shares are undervalued and with capital if he believes his shares are overvalued, so the use of cash may be indicative of managers' expectations of good results from the transaction. Therefore, in terms of market reaction, markets react more positively to F&A news in cash than in stocks.

The payment method only gives a signal about the vision of the managers of your business and their conviction about the success of the operation. But investors cannot rely solely on the form of payment as an indicator of their potential to create value (Mauboussin, 2010), as an acquirer may have had to pay with shares because it does not have enough cash or debt capacity to finance a very attractive investment, for example.

On one hand, the market reacts more favourably to cash transactions largely because the acquirer bears the full risk of return (Mauboussin, 2010), as such a buyer who uses cash is showing the market that he really expects the transaction to work. On the other hand, the use of shares as a means of payment allows the acquirer to share the risk of target overpricing with the target shareholders themselves and as a result the choice of shares as a form of payment is considered by some authors as a possible acquirer's response to uncertainty in target valuation.

Finally, Goergen and Renneboog (2004) analyse the fact that cash offers are more frequent in the case of small targets, the markets react more positively to acquirers who use shares as a means of payment for operations, which implies that in these cases the choice of means of payment does not act as a signal to the market about the over or undervaluation of the offeror's capital.

g) Premium paid

The premium is the price paid by the target company that exceeds its pre-acquisition market value and its justified by the potential synergies that can be created in the combination of the two companies. It is paid mainly to encourage target shareholders to sell, even there can be other reasons as Hitt et al. (2009) confirm (such as agency factor, hubris, not realizing a good Due Diligence, not enough knowledge of the target, etcetera).

However, the premium should not and cannot be greater than the potential synergies if the acquisition produces positive results. Notice that it is difficult to predict the value that can be created through synergies and also achieve them due to the challenges of integration (Sirower, 1998).

The literature, according to Gomes et al. (2013), has been pointing out that "paying too much" is an important cause of failure of operations and is a source of destruction of value, due to the difficulties of evaluation of the target company, especially in the case of international operations, due to the asymmetry of information (Seth et al., 2000). In fact, one of the factors considered significant in the results of operations (Hitt et al., 2009) is the magnitude of premiums paid on purchase, although it has been examined in a minority of studies.

Laamanen (2007) studies those premiums paid, which he quantifies between 20 and 30% of the total value of the acquisition, and states that, since the premium cannot be explained with synergies, previous research interprets it as a sign of poor quality in M&A decision making, competition to achieve the target or imitation of practices in use. There are even studies that argue that the payment of a high acquisition premium entails destruction of value for the acquirer's shareholders and others that use the size of the premium as a measure of the low quality of the decision-making process (Beckman and Haunschild, 2002). In any case, Laamanen (2007) proposes that if premiums continue to be paid, it is because of the existence of different combinations of target and acquirer resources that may be capable of creating value. Such combinations are difficult to identify and assign a value to using quantitative research instruments, a particularly relevant category being the case of investments in R&D targets, since technology-based companies are more difficult to value than other companies in general. This author affirms that the premium is justified when the target resources are difficult because of their market to value and that the results are more intensely affected by the level of the total price of the target than by the influence of the premium, whose role is residual and can be used to adjust the market valuation upwards, but not to adjust the acquisition prices below the market value.

h) Asymmetric information

Asymmetric information is the difference in information between seller and buyer, they occur in all transactions and are, as we shall see, particularly large in the case of cross-border transactions. Glendon (2010) in his doctoral thesis deals with the lack of qualitative evidence on the asymmetry of information among investors in M&A processes, however the asymmetry is present in one measure or another in many processes, often linked to the corporate governance model.

In fact, the asymmetric information is a determining factor when it comes to a good estimate of the synergies expected from an operation, since the seller knows much better the true value of what he sells than the buyer (Chatterjee, 2007), synergies that can finally result in an acquisition premium.

According to Schoenberg (2006), the ex-ante reactions of capital markets to announcements of acquisitions are not related to managers' ex-post valuations, reflecting the information asymmetry that may exist between investors and company management teams, particularly regarding implementation aspects.

In the case of operations with geographical distance and especially trans-border operations, the asymmetry of information takes on special relevance. In fact, authors such as Basu and Chevrier (2011) raise information asymmetry in M&A processes as a result of the distance between acquirer and target. According to Qiu and Zhou (2006), information asymmetries generate incentives for companies from different countries to enter M&A. Normally local companies, compared to foreign companies, have more information and are more familiar with the rules and working culture, effective ways of advertising, the distribution network, regulations and the interactions between consumers, suppliers and competitors, so that a merger with a local company is the only way for an international company to get it directly, so this information asymmetry creates incentives for merger between companies from different countries.

Furthermore, as Benou, Gleason, and Madura (2007) indicate, investor preception may be more favourable when the acquisition involves visible targets and advice from reputable investment banks, and even media attention in this case may have an impact on valuation.

On his behalf, Boeh (2011) explores the costs of contracting M&A, understood as fees paid and time required in the negotiation phase and concludes that buyers in international transactions tend to employ mechanisms that affect information asymmetry, which affects contracting costs, thus explaining why cross-border mergers are more costly and executed more quickly. In cases of important information asymmetry, companies use mechanisms to reduce it by increasing the generation of information through the use of public offers to obtain market information and by hiring advisers.

i) Other specific factors

One such case of specific factors is the importance of fixed assets in merging organizations and the location of headquarters (Cohen, 2010), which states that the geographic scope of physical operations and expected post-merger changes are determinants of success in M&A and therefore defining a strategy in this regard has long-term benefits such as cost control, revenue generation and organizational effectiveness.

In the case of cross-border transactions, geographical distance and the legal environment are important factors, as analysed (Kengelbach, Schwetzler and Sperling, 2010) in a study of 1507 transactions worldwide. Transactions between neighbour countries have better results than those with more distant countries (negative effect of neighbour country), which is explained because the acquirer does not benefit as much from a cross-border transaction with a nearby country, because it could serve him from his country of origin, so it offers a lower premium, which is directly reflected in the reaction of the capital market.

Besides, decisions taken in certain functional areas also have an impact on the results of the operation, as in the case of information systems (IS). Mehta and Hirschheim (2007) examine the alignment between information systems and business in IT integration decisions in the context of M&A, and identify the factors that shape system integration decisions. They conclude that alignment only occurs two or three years after the merger, because alignment between business and information systems is a minor concern for organizations in the pre-merger and post-merger phases and it is only later in the integration process that organizations rethink their systems to align them with business needs.

2.2.2. Soft factors

Once the hard factors have been reviewed, we move on to review the soft factors, considering as soft those variables that are basically qualitative and difficult to quantify, as opposed to the hard variables that are based on measurable and quantifiable elements, which we have just covered in the previous section.

If there are two common features in the literature on M&A (Bogan and Just, 2009) it is that all explanations are based on the idea that the M&A decision is a rational action and that they fail to fully explain the observed empirical results. However, it is the soft factors, which should be widely analysed by the management of the acquiring company in other to succeed, but specially in order not to fail.

There is general agreement among the authors that studying the impact of the human factor on the combination of organizations will lead to a better understanding of their success or failure (Bijlsma-Frankema, 2001), to the extent that the success or failure of an M&A deal depends on the individual's perception of how the process is handled and the direction in which the culture moves (Kavanagh and Ashkanasy, 2006).

The way in which those transactions are managed is determinant of their results (Marks and Mirvis, 2001). It is no coincidence that a large percentage of transaction failures are attributed to employee-related problems (Nikandrou, Papalexandris and Bourantas, 2000). During the transactions, employees experience what has come to be called the "merger syndrome", which is accompanied by an increase in selfishness or self-interest, as employees begin to worry about what integration really means to them, their income and their careers. In this sense, human resource management proves to be increasingly important for the outcome of M&As, which is not simply about financial transactions, but about processes that can significantly affect people's working lives (citing Cartwright and Cooper, 1996).

The same Marks and Mirvis, who already described the syndrome as the main cause of individual and organizational cultural problems, state that a way to mitigate its effects is a realistic preliminary view of the merger that provides relevant detailed information on the subject.

If management plays an important role in initiating M&A, employees have a crucial role in the post-integration process (Meyer, 2008). Moreover, there are many of the so-called soft factors that could be further developed, which would probably need an entire research paper. Some of those factors could be the transition in itself, social capital and capabilities, organisational identification, the headquarters, trust among employees and managers, communication, ethics and corporate social responsibility, culture differences and lace, and many other aspects or factors.

2.3. Shared value

After trying to explain and understand a little bit more about the value creation in the M&A transactions, as well as why do they succeed or fail, there is an important concept not yet presented and well related to value creation: “shared value”. This concept, fully and detailed explained by Porter and Kramer (2011),

> “can be defined as policies and operating practices that enhance the competitiveness of a company while simultaneously advancing the economic and social conditions in the communities in which it operates; it focuses on identifying and expanding the connections between societal and economic progress”.

Besides the plain definition, I think it is important to fully read and understand the article from these two writers in order to put it in practice to further develop M&A transactions, while escaping from old and outdated value creation philosophies. “The principle of shared value involves creating economic value in a way that also creates value for society by addressing its needs and challenges”. Therefore the “shared” in the name of the concept, as it purchases the sharing of both the economic and social point of view. The whole society, specially the businessmen daily working in these type of transaction,

> "will require leaders and managers to develop new skills and knowledge, such as a far deeper appreciation of societal needs, a greater understanding of the true bases of company productivity, and the ability to collaborate across profit/non-profit boundaries".(Porter and Kramer, 2011)

Furthermore, they emphasise that this concept "has the power to unleash the next wave of global growth". The activity of solving social problems is not in any corporate agenda, as they "have been ceded to governments and to NGOs", but actually "companies can create economic value by creating social value", and this is both really important to understand and really difficult to accept and apply. There are mainly "three key ways that companies can create shared value opportunities: by reconceiving products and markets, by redefining productivity in the value chain, and by enabling local cluster development".

3. Measuring value creation

I would like to make an important mention to the well-known book of *Corporate Finance: Theory and Practice*, as it is not only written my some of my professors from HEC Paris, but also has been useful during my Master's in International Finance. A book written by Pascal Quiry, Maurizio Dallochio, Yann Le Fur and Antonio Salvi, which covers the full scope of corporate finance and is the ancestor of the other well-known book *Finance d'Entreprise*, written by Pierre Vernimmen. More precisely, the Chapter 19 of the same book covers the measure of the value creation in corporate finance, therefore the title for this section of the research paper.

As explained before, value creation is an important issue for the entire financial industry and, therefore, being able to measure it becomes also important. Many indicators are used to measure value creation, even though they should be reduced to those that are truly reliable. In the Figure 5 there is a chronological appearance of different financial indicators, and as Vernimmen et al. (2014) stated:

> "predictably, the indicators cluster around a diagonal running from the upper left-hand corner down to the lower-right hand: this reflects the companies' diminished ability to manipulate the indicators over time. Gradually, investors become more experienced and financial markets become more influential, and therefore are less prone to misinterpreting company data".

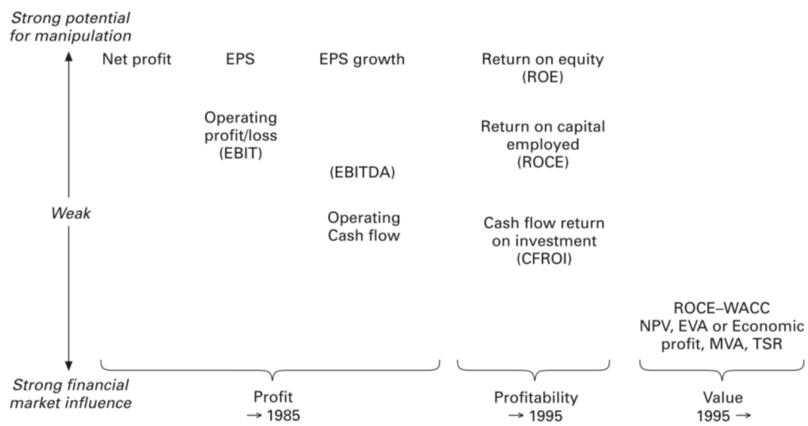

Figure 5. Evolution of Financial Indicators.

Source: Vernimmen et al., 2014.

These authors organised the most important value creation indicators into three different categories: accounting, economic and market indicators. These most important indicators are presented and briefly explained hereafter, mostly based on the mentioned book.

Before explained the main indicators, it is important to highlight that among those indicators when they are easier to use or to calculate (for example, because there is more information available to compute it or because the information needed is less complex) it means, in general, they might have some biases or be less precise or even make analyst mislead information.

Let’s now explain, quite briefly, as it could go on for many pages and many analysis and many explanations, which are all those indicators and how can we generally compute them.

3.1. Accounting based indicators

As Vernimmen et al. (2014) established, in general, accounting indicators are not really appropriate for measure value creation or for any other financial analysis, basically because they “can be manipulated” and “they may not consider the time value of money and the opportunity cost of capital”. Nevertheless, earnings per share (EPS) might be useful as it is believed that there is a relation between this criteria and value creation, which it does not mean that “by artificially boosting them you have created value”.

Later, there is a “second-generation accounting indicators” which take a closer look to profitability, as for example the return on equity ratio (ROE) or the return on capital employed ratio (ROCE), which improves the problem of ROE that can be leveraged by raising debt (for example).

Just quickly mention the formulas and methods of computing both ROE and ROCE, in order to understand them better, even though there are research papers on only these and other indicators that take a closer look into them.

$$ROE = \frac{net\ income}{book\ value\ of\ equity}$$

$$ROCE = \frac{EBIT \cdot (1 - tax\ rate)}{total\ assets - current\ liabilities} = \frac{NOPAT}{fixed\ assets + working\ capital}$$

3.2. Economic based indicators

After realizing that “profitability *per se* cannot fully measure value because it does not factor in risks, […] returns must also be compared with the cost of capital employed”, normally using the WACC (Weighted Average Cost of Capital), as Vernimenn et al. established. Therefore, we enter into the so-called economic indicators.

3.2.1. Net Present Value (NPV)

Clearly the most used indicator by any financial related person, as it "provides the exact measure of value creation", which leads to a well-known indicator, largely analysed and used, which only has a drawback, especially for outsiders of the company, as it requires to be computed over several periods (as shown by the formula). Even though, having access to all information, this should be the indicator that we need to use.

Basically, we have that creation of value can be computed as follows:

$$Creation\ of\ value = entreprise\ value - book\ value\ of\ capital\ employed$$

Which lately, for a giving project, knowing all the future profits it will get over the years, besides the WACC that affects the company, we get:

$$NPV = \sum_{i=0}^{\infty} \frac{economic\ profit_i}{(1 + WACC)^i} = \sum_{i=0}^{\infty} \frac{EVA_i}{(1 + WACC)^i}$$

3.2.2. Economic Value Added (EVA)

EVA can be defined as the changes in residual income along with the adjustments to the calculations in earnings and capital. It is a good indicator both for the retrospective evaluation of performances and also for prospective evaluation of performances. It can be computed as follows:

$$EVA = CE \cdot (ROCE - WACC) = NOPAT - WACC \cdot CE$$

3.3. Market based indicators

3.3.1. Market Value Added (MVA)

MVA measures the level of value a company has accumulated over time and it can be defined as the difference between the company's market value and book value. Therefore it can be computed as follows:

$$MVA = market\ capitalisation + net\ debt - book\ value\ of\ capital\ employed$$

3.3.2. Total Shareholder Return (TSR)

In words of the same authors,

> "TSR is the return received by the shareholder who bought the share at the beginning of a period, earned dividends, and values his portfolio with the last share price at the end of the period".

Therefore, we can compute TSR as follows:

$$TSR = \frac{(share\ price\ appreciation + dividends\ paid)}{price\ at\ the\ beginning\ of\ the\ period}$$

This indicator, along with the MVA, have a downfall or a drawback as the value measure can be lower, there might be a destruction of value, if the investor has some non-favourable expectations regarding the future of the company's profits.

3.3.3. Abnormal return

Abnormal return can be defined as the financial performance of a security or a portfolio in comparison with the market average, which basically means the difference between the actual return of a security or a portfolio and the expected return. The expected return is the return of a given benchmark, the market, and usually is a stock index (i.e. S&P500, FTSE, CAC40, Ibex35). Therefore, the abnormal return can be calculated as follows:

$$AR_{it} = R_{it} - R_{mt}$$

Where:

- AR_{it} is the abnormal return for a security or portfolio i at a specific time t
- R_{it} is the return of the security or portfolio i at a specific time t
- R_{mt} is the return of the given benchmark or market m at a specific time t

Chapter II. Case Study

1. Objective of the case study

In this case study I am trying to realise a small market analysis of the M&A transactions in Europe for the last years, and thereafter, an analysis to evaluate whether or not value is created. I have to say that this type of analysis should be much wider and more extensive, but after focusing more in the literature review to understand this type of transactions, I wanted to take a quick look at the market and how it operates. Thus, later someone can take my work done here, with many other works that we could find from other authors, and further analyse the market with more data, much more hours of study, and really try to help managers around Europe to succeed in any merger or acquisition.

2. Gathering of data

Firstly, to start the case study it was important to define the data that will be used, which sample of M&A transactions should be gathered. Later this data was extracted through the database of *Factset* and imported in Excel in order to realise all the analysis.

This case study focuses on all the public mergers and acquisitions transaction that took place between 2015 and 2018 in Europe. Important to highlight that they must be completed transactions, which occurred between public companies, as it was the better way to ensure that all the information was available. In Appendix 2, we can find a list of all those transactions, including the completion date, the acquirer company's name and country, along with the target company's name, country and industry sector, and finally the transaction value in MM€.

3. Methodology

Having all the data gathered together, and cleaned up if there was missing any information or there was any mistake, first I wanted to compute the abnormal return for each transaction, to know whether or not it created value (if it was positive or negative, as explained before in this research paper). To do so, I took the stock index of each market as the expected return and computed the real return, by using the initial and final price of the stocks and any dividends that were paid during the transaction, just as follows:

$$Real\ return = \frac{Final\ Price + Dividends - Initial\ Price}{Initial\ Price}$$

Later I used the formula of the abnormal return already explained:

$$AR_{it} = R_{it} - R_{mt}$$

Once I had the abnormal returns, I studied and analysed them grouping the transactions by countries, industries, years and size of transactions, as we can see on the next section.

4. Market analysis and results

4.1. Analysis by countries

As the Figure 10 and Figure 11 from the Appendix show, first, the percentage of transactions on the acquirer country and the target country stay quite similar, as many of the transactions occur on the same country, and for those that are over two different countries "equilibrate" as maybe there is, for example, a transaction between UK and Spain, another from Spain to Italy, and another from Italy to UK. Another thing to point out is that United Kingdom and France are the countries in which more transactions occur, with almost 30% and 12% of the transactions form both countries, respectively. Later, there is a big group of countries accounting between 2 and 7% of the European transactions, each of them, such as Germany, Italy, Sweden, Poland, Norway, Spain, etc..

This small analysis by countries could be important for a further work of analysis, resulting more interesting to analyse UK and France firstly, and then move on to the other countries, as we could find more data, more volume and, therefore, better conclusions on M&As in these countries (still waiting to see what happens if Brexit occurs).

4.2. Analysis by industry

There are lots of activities and industries in which the companies involved in M&As are operating, as we can see in Figure 12 from the Appendix. Nevertheless, I have tried to arrange them and group them in big groups of activities within the same industries, as we can see in Figure 6. With this smaller variety of industries, it was easier to analyse how the transactions went and whether it did or didn't create value.

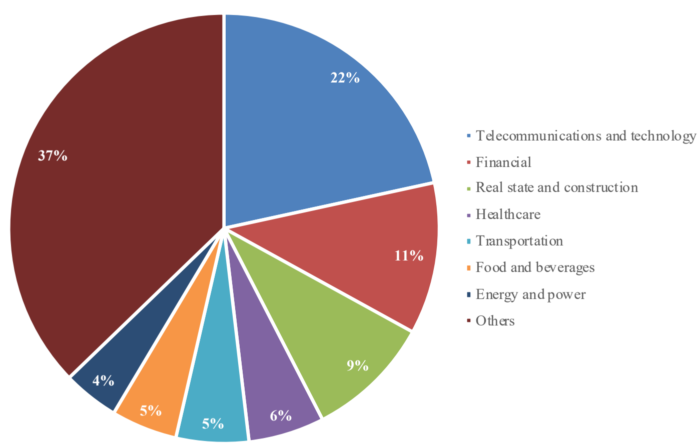

Figure 6. Target's industries grouped.

Source: FactSet data and own work.

We can appreciate in Figure 7 the huge variation among industries, even we can see that most of them generate positive returns, translating into value created for shareholders. Even the difference between industries, which seems normal, it is important to highlight that the variation within each industry is quite small, 10% maximum, with the exception of telecommunications and technology. Makes sense having a higher variation in the returns among the transactions in this industry, as it is still evolving really fast and it is usually difficult to predict whether the merge will create value or not, and some of them can fail a lot or success a lot.

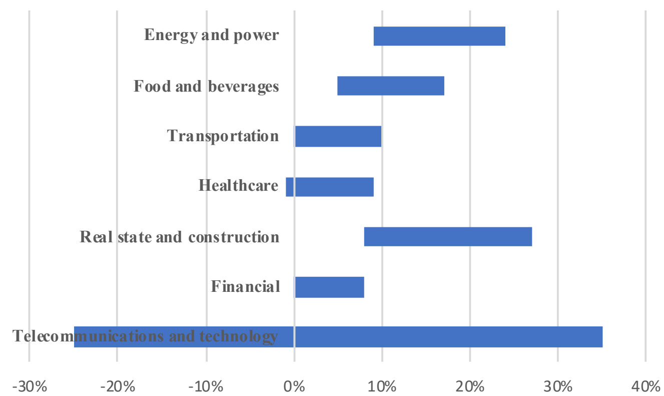

Figure 7. Abnormal Return by industry.

Source: own analysis.

4.3. Analysis by year

Regarding the years in which we took the transactions data, it is quite difficult to be able to draw a trend from any result obtained, especially as I studied just four consecutive years, and to be able to draw any trend we should analyse much more years and much more in detail. Nevertheless, just showing in Figure 8 the number of transactions that occur each year in the period of 2015-2018, which just points out that 2016 was the year with more transactions, almost 35 more (around 40% more) than the other years.

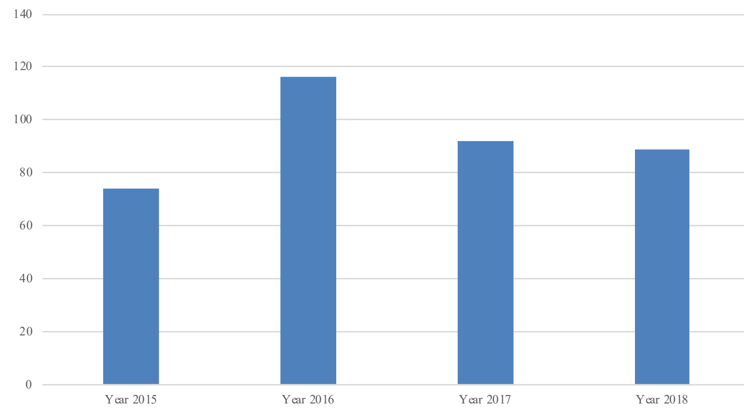

Figure 8. Number of transactions per year, 2015-2018.

Source: FactSet data and own work.

4.4. Analysis by size of the transaction

In terms of size of the transactions, in Figure 13 from the Appendix, we can see that 77% of the total involve less than 500 MM, meaning that it would be more useful to develop future studies for smaller transactions, as the conclusions could apply for the majority of further operations. Just remind that the size of the transaction affects its success and the value creation, therefore the study of a small or big transaction should be separated.

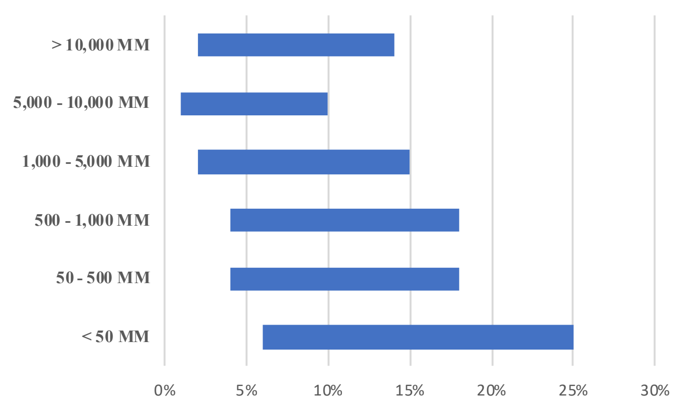

Figure 9. Abnormal Return by transactions' size.

Source: own work.

Analysing Figure 9, it seems that bigger the transactions, higher are the probabilities to fail. Nevertheless, the large differences may indicate that it is not always true and those differences could be significant, even having lower abnormal returns than smaller transactions.

4.5. General analysis

As a general analysis, with all the Annual Abnormal Return computed for each transaction, I defined a confidence interval for the mean of those returns, having as a results as follows:

- Mean = 5.16%
- Std. Deviation = 24.03%
- 95% CI = [3.92%, 6.4%]

Concluding that in average the M&A transactions in Europe from 2015 to 2018 created value for the shareholders of the acquiring companies, but it is a result with a high standard deviation, resulting in many companies having much lower value creation (even negative, so value destruction) and others with much higher returns. Therefore, it is quite better to analyse this industry of M&As transactions by industries, countries, size of transactions, etc., as already done before in this research paper.

Final conclusion

To conclude this research paper, I have to highlight that I have focused my attention mainly in the literature review, in reading and understanding much deeper the world of mergers and acquisitions. The main reason is because is a very extensive world in the finance environment, which needs a high understanding before even trying to get any conclusions with data samples. Therefore, I try to make a bit “easier”, or at least more “understandable”, for any future reader, who wants to penetrate in M&As analysis, so he or she could later focus more in a more data analysis and get some conclusions.

After many hours of deep reading while working on this research paper, I can conclude that, or at least I want to point out, researchers and especially managers should focus their attention in two main topics: soft factors and shared value concept. On one hand, hard factors are widely analysed, like in this same paper, and widely known, but managers still do not pay attention to soft factor, to people and their reaction to a merge or acquisition. Once they can take more consideration in that and try to make their employees work and life better while the transaction occurs, the higher the probabilities of success will be. On the other hand, *shared value*, the concept introduced by *McKinsey*, from my point of view, should be highly known my managers and be in their priority tasks in order to succeed.

Finally, this financial world of M&A transactions is huge, and very diverse, so it is difficult to take some conclusions with just data from a few transactions over the last 4 years. Further analysis should be taken with a larger data sample and try to help managers to succeed in their duties.

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Appendix

1. Data gathering

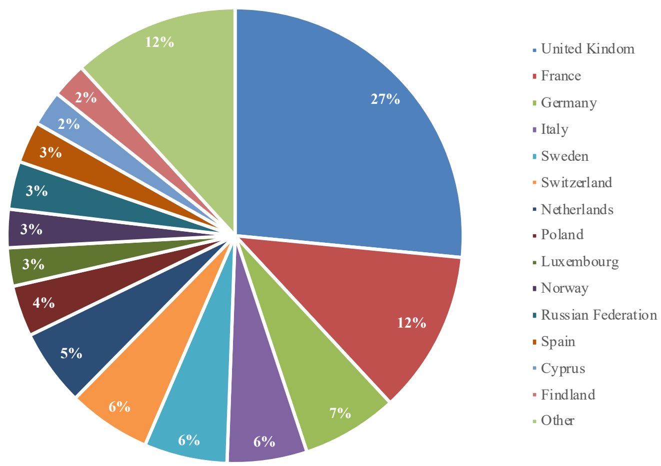

Figure 10. Acquirer's countries.

Source: FactSet data and own work.

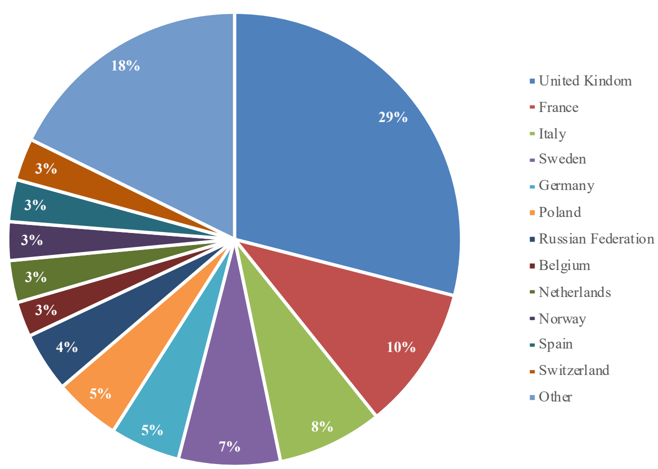

Figure 11. Target's countries.

Source: FactSet data and own work.

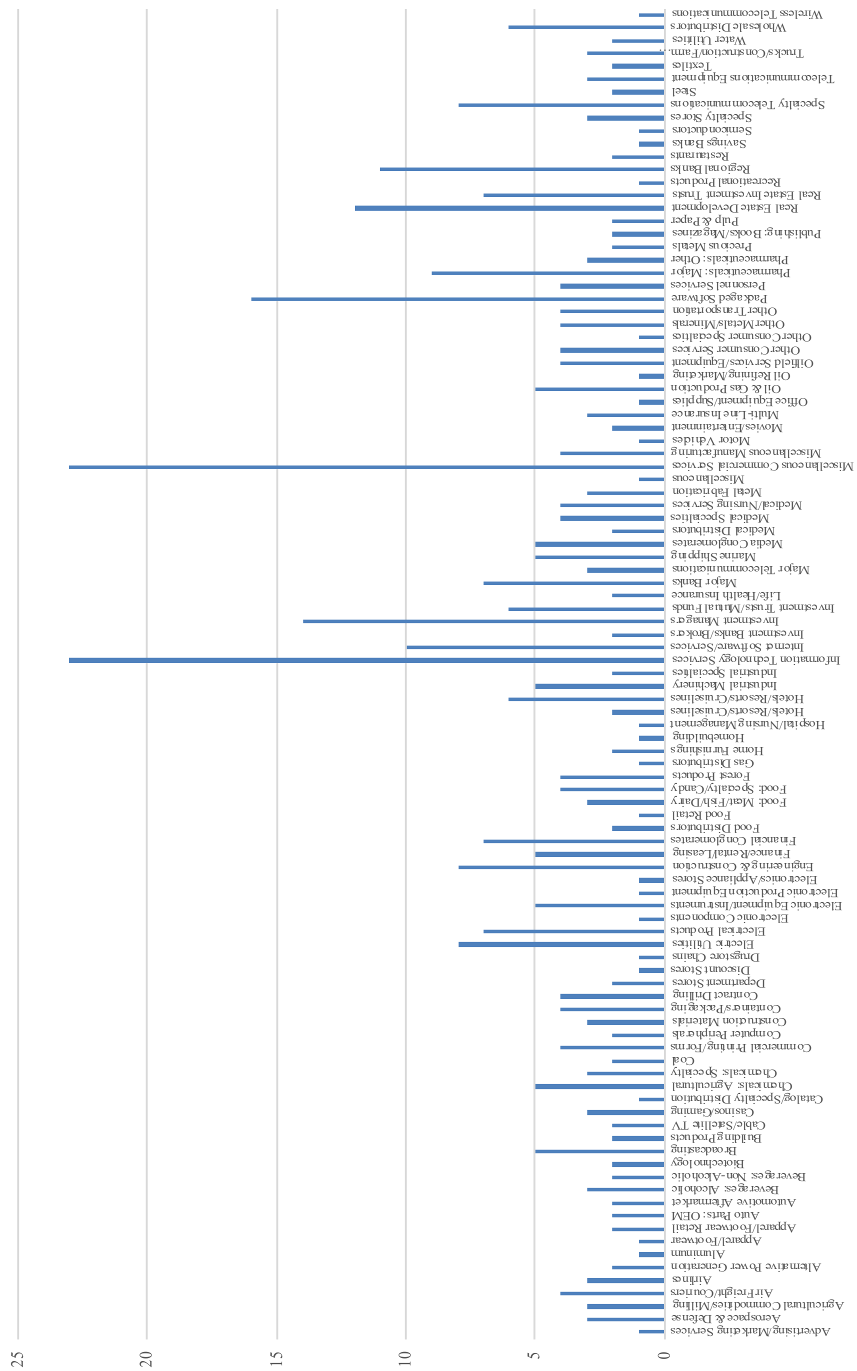

Figure 12. Target’s industries.

Source: FactSet data and own work.

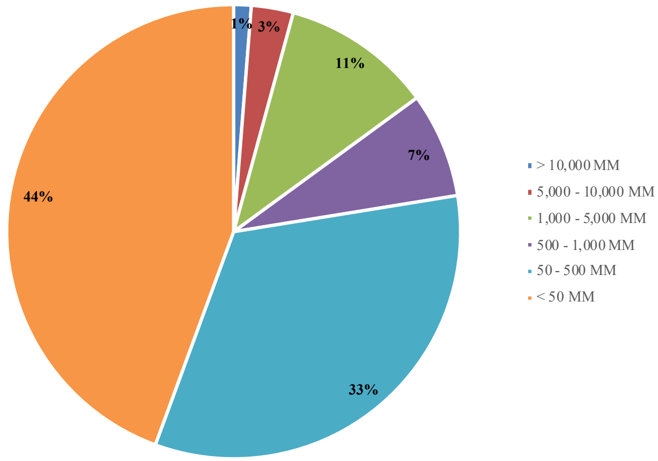

Figure 13. Size of the transactions.

Source: FactSet data and own work.

2. Deals list

Completion Date	Acquirer	Acquirer Country	Transaction Value (MM)	Target	Target Country	Target Industry
31-Dec-2018	Foncière des Régions SA	France	786.44	Beni Stabili SpA SIIQ	Italy	Real Estate Investment Trusts
27-Dec-2018	CaixaBank SA	Spain	151.31	Banco BPI SA	Portugal	Major Banks
26-Dec-2018	Alliance Rostec Auto BV	Netherlands	60.80	AvtoVAZ PJSC	Russian Federation	Motor Vehicles
18-Dec-2018	Société de la Tour Eiffel SA	France	480.92	Affine RE SA	France	Real Estate Development
13-Dec-2018	Lifull Co., Ltd.; Trovit Search SL	Japan; Spain	114.25	Mitula Group Ltd.	Spain	Internet Software/Services
13-Dec-2018	Navios Maritime Acquisition Corp.	Monaco	29.27	Navios Maritime Midstream Partners LP	Monaco	Marine Shipping
06-Dec-2018	Fundación Mapfre; Mapfre España Cia de Seguros y Reaseguros SA	Spain	5.52	Funespaña SA	Spain	Other Consumer Services
05-Dec-2018	Transocean Ltd.	Switzerland	2,325.28	Ocean Rig UDW, Inc.	Cyprus	Oilfield Services/Equipment
04-Dec-2018	Dagon Sverige AB	Sweden	381.44	A Group of Retail Assets Sweden AB	Sweden	Real Estate Development
30-Nov-2018	Vistula Group SA	Poland	45.78	Bytom SA	Poland	Textiles
28-Nov-2018	Ramsay Générale de Santé SA	France	1,170.93	Capio AB	Sweden	Hospital/Nursing Management
20-Nov-2018	INYPSA Informes y Proyectos SA	Spain	142.70	Carbures Europe SA	Spain	Electrical Products
16-Nov-2018	Vonovia SE	Germany	5,358.74	Buwog AG	Austria	Real Estate Development
16-Nov-2018	Groupe SFPI SA	France	30.85	DOM Security SA	France	Metal Fabrication
16-Nov-2018	Promethean Investments LLP	United Kingdom	89.10	Produce Investments Plc	United Kingdom	Agricultural Commodities/Milling
16-Nov-2018	Plasta doo	Slovenia	5.19	Tovarna olja GEA dd	Slovenia	Food: Specialty/Candy
05-Nov-2018	Tele2 AB	Sweden	3,703.15	Com Hem Holding AB	Sweden	Cable/Satellite TV
02-Nov-2018	Télévision Française 1 SA	France	81.88	Aufeminin SA	France	Internet Software/Services
31-Oct-2018	Poolia AB	Sweden	28.21	Uniflex AB	Sweden	Personnel Services
19-Oct-2018	Mediaset SpA; Elettronica Industriale SpA; 2i Towers Holding SRL; 2i Towers Srl	Italy	1,894.09	EI Towers SpA	Italy	Telecommunications Equipment
18-Oct-2018	CareTech Holdings Plc	United Kingdom	338.01	Cambian Group Plc	United Kingdom	Medical/Nursing Services
17-Oct-2018	Basler Kantonalbank	Switzerland	184.20	Bank Cler AG	Switzerland	Regional Banks
17-Oct-2018	Fenice SpA	Italy	29.43	Zephyro SpA	Italy	Miscellaneous Commercial Services
15-Oct-2018	CYBG Plc	United Kingdom	1,948.71	Virgin Money Holdings UK Plc	United Kingdom	Savings Banks
12-Oct-2018	Odyssey Europe AS	Estonia	21.23	Olympic Entertainment Group AS	Estonia	Casinos/Gaming

10-Oct-2018	Ligand Holdings UK Ltd.	United Kingdom	36.27	Vernalis Plc	United Kingdom	Pharmaceuticals: Major
09-Oct-2018	ABRY Partners LLC; Link Mobility Group ASA /Private Group/	United States; Norway	438.89	LINK Mobility Group ASA	Norway	Wireless Telecommunications
04-Oct-2018	Russian Copper Co. Ltd.	Russian Federation	167.71	Amur Minerals Corp.	Russian Federation	Other Metals/Minerals
01-Oct-2018	Polski Koncern Naftowy ORLEN SA	Poland	995.26	UNIPETROL as	Czech Republic	Oil Refining/Marketing
28-Sep-2018	Dalmore Capital Ltd.; Equitix Investment Management Ltd; Laing John Infrastructure Fund Ltd /Private Group/	United Kingdom	1,597.87	John Laing Infrastructure Fund Ltd.	United Kingdom	Investment Managers
24-Sep-2018	Vittoria Capital SpA (Italy)	Italy	384.50	Vittoria Assicurazioni SpA	Italy	Multi-Line Insurance
18-Sep-2018	Givaudan SA	Switzerland	934.56	Naturex SA	France	Food: Specialty/Candy
17-Sep-2018	Sopharma AD	Bulgaria	2.79	Unipharm AD	Bulgaria	Pharmaceuticals: Other
11-Sep-2018	FSN Capital Partners AS	Norway	263.41	Saferoad Holding ASA	Norway	Miscellaneous Manufacturing
31-Aug-2018	Medical Prognosis Institute A/S	Denmark	27.35	Oncology Venture Sweden AB	Denmark	Biotechnology
21-Aug-2018	Soitec SA; MBDA France SAS; MBDA Holding SAS; Dolphin Intégration SA /Private Group/	France	10.90	Dolphin Intégration SA	France	Semiconductors
15-Aug-2018	Apollo Global Real Estate Management LP; Bremer Kreditbank AG; Grovepoint Capital LLP; Apollo Global Management LLC (Private Equity)	United States; Germany; United Kingdom	27.17	Oldenburgische Landesbank AG	Germany	Regional Banks
13-Aug-2018	Eagle Bidco 2018 Ltd.	United Kingdom	5.56	Electronic Data Processing Plc	United Kingdom	Information Technology Services
03-Aug-2018	Hochtief AG; Atlantia SpA; ACS Actividades de Construcción y Servicios SA; Abertis Infraestructuras SA /Private Group/	Germany; Italy; Spain	31,246.16	Abertis Infraestructuras SA	Spain	Engineering & Construction
03-Aug-2018	Playtech Plc	United Kingdom	83.40	SNAITECH SpA	Italy	Casinos/Gaming
30-Jul-2018	Sella Open Fintech Platform SpA	Italy	23.14	Vipera Plc	United Kingdom	Information Technology Services
26-Jul-2018	Axens SA	France	6.01	Heurtey Petrochem SA	France	Industrial Machinery
19-Jul-2018	Government of Qatar; Qatar Holding LLC; GBT III BV	Qatar; Netherlands	479.84	Hogg Robinson Group Plc	United Kingdom	Air Freight/Couriers
12-Jul-2018	Phosphore SARL	France	0.82	Groupe Rivalis SA	France	Information Technology Services
02-Jul-2018	Inmobiliaria Colonial SOCIMI SA	Spain	182.14	Axiare Patrimonio SOCIMI SA	Spain	Real Estate Investment Trusts
02-Jul-2018	TCC Assets Ltd.; Frasers Property International Pte Ltd.; Frasers Property Investments Holland BV	Singapore; Netherlands	48.87	Geneba Properties NV	Netherlands	Real Estate Development
30-Jun-2018	Melrose Industries Plc	United Kingdom	9,732.76	GKN Plc	United Kingdom	Auto Parts: OEM

29-Jun-2018	Icade SA	France	61.62	ANF Immobilier SA	France	Real Estate Investment Trusts
29-Jun-2018	Abris Capital Partners Sp zoo	Poland	39.15	WDX SA	Poland	Industrial Machinery
27-Jun-2018	Maritemi AB	Sweden	8.95	Rasta Group AB	Sweden	Hotels/Resorts/Cruiselines
21-Jun-2018	Antin Infrastructure Partners SAS; Goldman Sachs Asset Management LP (Private Equity); Cityfibre Infrastructure Holdings /Pvt Group/	France; United States; United Kingdom	479.30	CITYFIBRE INFRASTRUCTURE HOLDINGS PLC	United Kingdom	Electrical Products
20-Jun-2018	Compagnie Financière Richemont	Switzerland	2,601.07	Yoox Net-A-Porter Group SpA	Italy	Catalog/Specialty Distribution
15-Jun-2018	Informa Plc	United Kingdom	4,870.03	UBM Plc	United Kingdom	Publishing: Books/Magazines
12-Jun-2018	Sanofi	France	3,362.63	Ablynx NV	Belgium	Biotechnology
08-Jun-2018	Fortbet Holdings Ltd.	Cyprus	71.79	Fortuna Entertainment Group NV	Netherlands	Media Conglomerates
08-Jun-2018	Ringkjøbing Landbobank A/S	Denmark	466.63	Nordjyske Bank A/S	Denmark	Regional Banks
07-Jun-2018	ATP Arbejdsmarkedets Tillægspension; PFA Pension; Pensionskassernes Administration A/S; Macquarie Infrastructure & Real Assets (Europe) Ltd.; TDC A/S (Private Group)	Denmark; United Kingdom	8,720.42	TDC A/S	Denmark	Major Telecommunications
01-Jun-2018	Royal Bank of Scotland Group Plc	United Kingdom	52.19	FreeAgent Holdings Plc	United Kingdom	Packaged Software
31-May-2018	Compagnie Générale des Établissements Michelin SCA	France	1,424.51	Fenner Plc	United Kingdom	Miscellaneous Manufacturing
25-May-2018	Hanover Investors Management LLP	United Kingdom	29.19	Escher Group Holdings Ltd.	Ireland	Information Technology Services
15-May-2018	UI Gestion SA	France	0.20	Solia SA	France	Containers/Packaging
09-May-2018	Freedom Finance JSC	Kazakhstan	2.00	Asyl-Invest JSC	Kazakhstan	Investment Banks/Brokers
27-Apr-2018	Allianz SE	Germany	1,069.82	Euler Hermes Group SA	France	Multi-Line Insurance
18-Apr-2018	TT Electronics Plc	United Kingdom	64.54	Stadium Group Plc	United Kingdom	Electrical Products
05-Apr-2018	Sampo Oyj; Nordic Capital Ltd.; Triona Holding SA	Finland; United Kingdom; Switzerland	471.76	Nordax Group AB	Sweden	Regional Banks
03-Apr-2018	BC Investment Management Corp.; PAI Partners SAS; Refresco Group NV /Private Group/	Canada; France; Netherlands	2,267.25	Refresco Group NV	Netherlands	Beverages: Non-Alcoholic
28-Mar-2018	GVC Holdings Plc	United Kingdom	5,605.30	LADBROKES CORAL GROUP PLC	United Kingdom	Media Conglomerates
28-Mar-2018	Croda, Inc.; Croda Europe Ltd.	United States; United Kingdom	3.65	Plant Impact Ltd.	United Kingdom	Chemicals: Agricultural
27-Mar-2018	Hispania Activos Inmobiliarios SOCIMI SA	Spain	1.83	Bay Hotels & Leisure SOCIMI SA	Spain	Hotels/Resorts/Cruiselines
23-Mar-2018	Safran SA	France	8,030.59	Zodiac Aerospace SA	France	Aerospace & Defense

20-Mar-2018	Transocean Ltd.	Switzerland	2,695.35	Songa Offshore SE	Cyprus	Contract Drilling
08-Mar-2018	Extentia Group Ltd.	United Kingdom	51.88	STYLES & WOOD GROUP PLC	United Kingdom	Miscellaneous
05-Mar-2018	Tesco Plc	United Kingdom	4,226.01	Booker Group Plc	United Kingdom	Food Distributors
05-Mar-2018	Eurocommercial Properties NV	Netherlands	468.00	Woluwe Shopping Center	Belgium	Miscellaneous Commercial Services
26-Feb-2018	Natixis SA	France	77.59	Dalenys SA	Belgium	Internet Software/Services
23-Feb-2018	HgCapital LLP	United Kingdom	26.65	Dada SpA	Italy	Internet Software/Services
23-Feb-2018	Vermeg Group NV	Netherlands	58.46	Lombard Risk Management Ltd.	United Kingdom	Packaged Software
21-Feb-2018	K-Holding SpA	Italy	5.73	GEKOPLAST SA	Poland	Miscellaneous Manufacturing
19-Feb-2018	Assystem Services Deutschland GmbH	Germany	336.68	SQS Software Quality Systems AG	Germany	Information Technology Services
13-Feb-2018	Highlight Communications AG; Studhalter Investment AG; Constantin Medien AG /Private Group 1/	Switzerland; Germany	221.64	Constantin Medien AG	Germany	Movies/Entertainment
13-Feb-2018	DTEK Power Trade LLC	Ukraine	1.35	DTEK Dniproenergo PJSC	Ukraine	Electric Utilities
13-Feb-2018	System Capital Management JSC; DTEK Power Trade LLC	Ukraine	1.47	DTEK Zakhidenergo PJSC	Ukraine	Electric Utilities
12-Feb-2018	Advent International Corp.; Sampo Oyj; Hellman & Friedman LLC; Bain Capital Private Equity LP; GIC Special Investments Pte Ltd.; StepStone Group LP; Fisher Lynch Capital LLC; Nets AS /Private Group/	United States; Finland; Singapore; Denmark	3,415.92	Nets A/S	Denmark	Packaged Software
06-Feb-2018	Promkhimtorg LLC	Russian Federation	8.12	Meleuz Mineral Fertilisers OJSC	Russian Federation	Chemicals: Agricultural
01-Feb-2018	YIT Oyj	Finland	798.33	Lemminkäinen Oyj	Finland	Engineering & Construction
19-Jan-2018	Goldcup 15638 AB	Sweden	511.33	Melker Schörling AB	Sweden	Investment Trusts/Mutual Funds
15-Jan-2018	Montagu Private Equity LLP	United Kingdom	253.06	SERVELEC GROUP ltd	United Kingdom	Packaged Software
05-Jan-2018	RiverRock European Capital Partners LLP	United Kingdom	175.91	ALNO AG	Germany	Building Products
02-Jan-2018	Orion Capital Managers LLP; Orion IV European I SARL	United Kingdom; Luxembourg	1.49	Sotogrande SA	Spain	Real Estate Development
28-Dec-2017	Absolute Invest Ltd.	Switzerland	4.28	Altin AG	Switzerland	Investment Trusts/Mutual Funds
26-Dec-2017	Synthos SA /Solowow/	Poland	577.64	Synthos SA	Poland	Containers/Packaging
22-Dec-2017	Pallinghurst Resources Ltd.	United Kingdom	155.76	Gemfields Plc	United Kingdom	Other Metals/Minerals
20-Dec-2017	Blackstone Corporate Private Equity; CVC Capital Partners Ltd.; Paysafe Group Plc /Private Group/	United States; United Kingdom	3,282.47	PAYSAFE GROUP PLC	United Kingdom	Regional Banks

18-Dec-2017	Government of China; CNAC Saturn (NL) BV	China; Netherlands	42,006.69	Syngenta AG	Switzerland	Chemicals: Agricultural
08-Dec-2017	Thermo Technologies SASU	France	10.39	Thermocompact SA	France	Metal Fabrication
01-Dec-2017	Tieto Sweden AB	Sweden	48.34	Avega Group AB	Sweden	Information Technology Services
17-Nov-2017	Irdi Soridec Gestion SAS; Parquest Capital SAS; CM CIC Investissement SA; Acces Industrie SA /Private Group/	France	3.81	Accès Industrie SA	France	Finance/Rental/Leasing
10-Nov-2017	Talbot Holding AG	Switzerland	239.46	ImmoMentum AG	Switzerland	Real Estate Development
03-Nov-2017	Verint WS Holdings Ltd.	United Kingdom	25.16	eg solutions Ltd.	United Kingdom	Packaged Software
03-Nov-2017	F2i Fondi Italiani per le infrastrutture SGR SpA; 2i Fiber SpA; Marguerite Infrastructure Italy II SARL	Italy; Luxembourg	2.57	MC-link SpA	Italy	Information Technology Services
01-Nov-2017	Michael Kors Holdings Ltd.	United Kingdom	1,136.98	Jimmy Choo Plc	United Kingdom	Apparel/Footwear
01-Nov-2017	Clinigen Group Plc	United Kingdom	158.60	Quantum Pharma Holdings Ltd.	United Kingdom	Pharmaceuticals: Major
25-Oct-2017	Vonovia SE	Germany	120.27	conwert Immobilien Invest SE	Austria	Real Estate Development
25-Oct-2017	Borealis Infrastructure Corp.; Tredje AP-fonden (Private Equity); Folksam /Private Equity/; Ellevio Holding 1 AB	Canada; Sweden	59.51	Elverket Vallentuna AB	Sweden	Electric Utilities
23-Oct-2017	Finanziaria Internazionale Holding SpA (Private Equity); Agorà Investimenti SpA; Morgan Stanley Infrastructure, Inc.; Infrahub SRL	Italy; United States	457.01	SAVE SpA	Italy	Other Transportation
18-Oct-2017	Mespila SA	Poland	75.61	Paged SA	Poland	Forest Products
17-Oct-2017	IP Group Plc	United Kingdom	566.74	Touchstone Innovations Plc	United Kingdom	Investment Managers
12-Oct-2017	Karo Pharma AB	Sweden	167.21	Weifa ASA	Norway	Pharmaceuticals: Major
09-Oct-2017	Altrad UK Ltd.	United Kingdom	368.32	Cape Plc	United Kingdom	Financial Conglomerates
09-Oct-2017	Altice NV	Netherlands	632.76	SFR Group SA	France	Specialty Telecommunications
06-Oct-2017	John Wood Group Plc	United Kingdom	3,749.62	Amec Foster Wheeler Plc	United Kingdom	Engineering & Construction
06-Oct-2017	TLG Immobilien AG	Germany	892.50	WCM Beteiligungs- und Grundbesitz AG	Germany	Real Estate Development
05-Oct-2017	FIBA Beteiligungs- und Anlage GmbH	Austria	21.23	BWT AG	Austria	Industrial Machinery
27-Sep-2017	GetBack SA	Poland	0.30	EGB Investments SA	Poland	Miscellaneous Commercial Services
18-Sep-2017	Endeavour Mining Corp.	United Kingdom	97.13	Avnel Gold Mining Ltd.	United Kingdom	Precious Metals
15-Sep-2017	VTTI BV	Netherlands	1,073.42	VTTI Energy Partners LP	United Kingdom	Wholesale Distributors
12-Sep-2017	Elis SA	France	2,985.25	Berendsen Plc	United Kingdom	Miscellaneous Commercial Services

12-Sep-2017	Calculus VCT Plc; Calculus Capital Ltd.	United Kingdom	2.72	Neptune-Calculus Income & Growth VCT Plc	United Kingdom	Investment Managers
01-Sep-2017	Fiserv UK Ltd.	United Kingdom	52.45	Monitise Plc	United Kingdom	Packaged Software
31-Aug-2017	BC Partners Ltd.; Pollen Street Capital Ltd.; Shawbrook Group Plc /Private Group/	United Kingdom	608.16	Shawbrook Group Plc	United Kingdom	Major Banks
30-Aug-2017	Avingtrans Plc	United Kingdom	56.66	Hayward Tyler Group Plc	United Kingdom	Industrial Machinery
24-Aug-2017	Capital Stage AG	Germany	16.51	CHORUS Clean Energy AG	Germany	Investment Managers
24-Aug-2017	Patron Capital Advisers LLP	United Kingdom	1,945.44	PUNCH TAVERNS PLC	United Kingdom	Miscellaneous Commercial Services
14-Aug-2017	Standard Life Plc	United Kingdom	4,383.37	Aberdeen Asset Management Plc	United Kingdom	Investment Managers
11-Aug-2017	Banque Fédérative du Crédit Mutuel SA; Caisse Fédérale de Crédit Mutuel SA; Mutuelles Investissements SAS	France	1,017.75	Crédit Industriel et Commercial SA	France	Financial Conglomerates
08-Aug-2017	Chisbridge Ltd.	United Kingdom	19.00	InterQuest Group Ltd.	United Kingdom	Personnel Services
04-Aug-2017	EQT Partners AB	Sweden	33.96	DGC One AB	Sweden	Specialty Telecommunications
04-Aug-2017	Sport Business Acquisitions Ltd.	United Kingdom	4.74	Electric Word Ltd.	United Kingdom	Publishing: Books/Magazines
31-Jul-2017	Zoetis Belgium SA	Belgium	63.08	Nexvet Biopharma Plc	Ireland	Pharmaceuticals: Major
27-Jul-2017	Silver Lake Management Co. LLC; AltaOne Capital LLP; Cegid Group /Private Group/	United States; United Kingdom; France	75.65	Cegid Group SA	France	Packaged Software
26-Jul-2017	Permira Advisers LLP; Pantheon Holdco Ltd.	United Kingdom	177.34	TBS Group SpA	Italy	Information Technology Services
24-Jul-2017	Asseco Business Solutions SA	Poland	25.36	Macrologic SA	Poland	Packaged Software
23-Jul-2017	Hansteen Holdings Plc	United Kingdom	32.51	Industrial Multi Property Trust Plc	United Kingdom	Investment Trusts/Mutual Funds
18-Jul-2017	21 Centrale Partners SAS; Amundi Private Equity Funds SA; SWEN Capital Partners SA; DL Software SA /Private Group/	France	3.95	DL SOFTWARE SA	France	Packaged Software
18-Jul-2017	Groupe Marc de Lacharrière SA	France	206.44	Fimalac SA	France	Finance/Rental/Leasing
18-Jul-2017	QInvest LLC; Atlas Merchant Capital LLC; Panmure Gordon & Co. Plc /Private Group/	Qatar; United States; United Kingdom	10.13	Panmure Gordon & Co. Plc	United Kingdom	Investment Banks/Brokers
13-Jul-2017	Phenomind Ventures SA; Stanusch Technologies SA /Private Group/	Poland	0.20	Stanusch Technologies SA	Poland	Information Technology Services
11-Jul-2017	LabTech Investments Ltd.	United Kingdom	306.32	Market Tech Holdings Ltd.	United Kingdom	Real Estate Investment Trusts
05-Jul-2017	Fairfax Financial Holdings Ltd.; Ontario Municipal Employees Retirement System; Allied World Assurance Co. Holdings AG /Private Group/	Canada; Switzerland	4,318.14	Allied World Assurance Company Holdings AG	Switzerland	Multi-Line Insurance

29-Jun-2017	Nokia Solutions & Networks Oy	Finland	332.63	Comptel Oyj	Finland	Packaged Software
29-Jun-2017	Element Materials Technology Ltd.	United Kingdom	888.06	Exova Group Ltd.	United Kingdom	Miscellaneous Commercial Services
21-Jun-2017	Solstad Offshore ASA /Old/	Norway	583.12	Deep Sea Supply Plc	Cyprus	Marine Shipping
21-Jun-2017	Solstad Offshore ASA /Old/	Norway	1,331.41	Farstad Shipping ASA	Norway	Marine Shipping
16-Jun-2017	Penta Capital LLP; Toscafund Asset Management LLP; Old Oak Holdings Ltd.; Circle Holdings Plc /Private Group/	United Kingdom	60.87	Circle Holdings Plc	United Kingdom	Medical/Nursing Services
07-Jun-2017	Banco Santander SA	Spain	3,800.00	Banco Popular Español SA	Spain	Major Banks
06-Jun-2017	Kindred Group Plc	Malta	185.79	32Red Plc	Gibraltar	Media Conglomerates
05-Jun-2017	DKL Investments Ltd.	United Kingdom	32.11	Ithaca Energy, Inc.	United Kingdom	Contract Drilling
31-May-2017	NN Group NV	Netherlands	2,458.54	NN Group Bidco BV	Netherlands	Life/Health Insurance
29-May-2017	ReWorld Media SA	France	4.98	Sporever SA	France	Internet Software/Services
25-May-2017	Advent International Corp.; Inpost SA /Private Group/	United States; Poland	36.35	InPost SA	Poland	Miscellaneous Commercial Services
24-May-2017	Project Shortway Ltd.	United Kingdom	173.41	Sepura Plc	United Kingdom	Telecommunications Equipment
18-May-2017	Indra Sistemas SA	Spain	334.02	TECNOCOM Telecomunicaciones y Energía SA	Spain	Telecommunications Equipment
01-May-2017	Axxess Capital Partners SA; Nextebank SA	Romania	23.34	Banca Comerciala Carpatica SA	Romania	Regional Banks
18-Apr-2017	Is Gayrimenkul Yatirim Ortakligi AS; Türkiye Sinai Kalkinma Bankasi AS	Turkey	80.37	TSKB Gayrimenkul Yatirim Ortakligi AS	Turkey	Real Estate Investment Trusts
17-Apr-2017	EKTOSintez OAO	Russian Federation	367.92	Uralorgsintez OJSC	Russian Federation	Chemicals: Specialty
03-Apr-2017	Geoex Ltd.	United Kingdom	7.49	MultiClient Geophysical AS	Norway	Oilfield Services/Equipment
31-Mar-2017	Munksjö Oyj	Finland	809.07	Ahlstrom Oyj	Finland	Pulp & Paper
31-Mar-2017	Betsson AB	Sweden	20.64	NetPlay TV Ltd.	United Kingdom	Internet Software/Services
29-Mar-2017	Lem SpA	Italy	2.68	Alba SpA	Italy	Investment Managers
28-Mar-2017	Rhombi Holdings Ltd.	United Kingdom	742.11	e2v technologies Plc	United Kingdom	Aerospace & Defense
27-Mar-2017	Vonovia SE	Germany	2,810.53	conwert Immobilien Invest SE	Austria	Real Estate Development
27-Mar-2017	CapMan Oyj	Finland	117.83	Norvestia Oyj	Finland	Investment Managers
21-Mar-2017	Wabtec France SAS	France	771.42	Faiveley Transport	France	Trucks/Construction/Farm Machinery
21-Mar-2017	Accenture Digital France Holdings SASU	France	49.29	OCTO Technology SA	France	Information Technology Services
21-Mar-2017	Talsu mezrupnieciba AS /Management/	Latvia	0.05	Talsu mezrupnieciba AS	Latvia	Forest Products

18-Mar-2017	Raiffeisen Bank International AG	Austria	481.51	Raiffeisen Zentralbank Österreich AG	Austria	Major Banks
13-Mar-2017	Altor AB; Altor Fund Manager AB	Sweden	202.43	Transcom WorldWide AB	Sweden	Miscellaneous Commercial Services
07-Mar-2017	Farmacol SA /Private Group/	Poland	129.82	Farmacol SA	Poland	Drugstore Chains
06-Mar-2017	Tikehau Capital Advisors SAS	France	169.51	Salvepar SAS	France	Financial Conglomerates
20-Feb-2017	LOXAM SAS; Pragma Capital SA; 3i Private Equity	France; United Kingdom	539.02	Lavendon Group Plc	United Kingdom	Finance/Rental/Leasing
17-Feb-2017	Swordus Ireland Holding Ltd.	Ireland	832.31	Fyffes Ltd.	Ireland	Agricultural Commodities/Milling
15-Feb-2017	Severn Trent Water Ltd.	United Kingdom	156.04	Dee Valley Group Plc	United Kingdom	Water Utilities
14-Feb-2017	Armira GmbH & Co. KG; A.II Holding AG	Germany	11.92	F24 AG	Germany	Miscellaneous Commercial Services
07-Feb-2017	LNK Group	Latvia	0.29	Latvijas Tilti AS	Latvia	Homebuilding
30-Jan-2017	Axfood AB	Sweden	53.44	Matse Holding AB	Sweden	Specialty Stores
24-Jan-2017	Idox Plc	United Kingdom	36.77	6pm Holdings Plc	Malta	Information Technology Services
24-Jan-2017	D Participation Management SA; DM Invest Srl	Belgium; Italy	306.09	Moleskine SpA	Italy	Commercial Printing/Forms
17-Jan-2017	Boryszew SA	Poland	3.07	Hutmen SA	Poland	Other Metals/Minerals
11-Jan-2017	MCA Orbital Global Holdings Ltd.	Cyprus	15.66	Kleemann Hellas SA	Greece	Building Products
03-Jan-2017	Norvestor Equity AS	Norway	29.65	Nordic Camping & Resort AB	Sweden	Other Consumer Services
01-Jan-2017	Banco Popolare Società Cooperativa SCRL	Italy	5,006.61	Banca Popolare di Milano SCRL	Italy	Regional Banks
27-Dec-2016	Allianz ZB doo; Valamar Riviera dd; Imperial dd /Private Group/	Croatia	28.15	Imperial dd	Croatia	Hotels/Resorts/Cruiselines
23-Dec-2016	Daisy Group Ltd.; Oakley Capital Ltd. (Private Equity)	United Kingdom	217.52	Alternative Networks Plc	United Kingdom	Specialty Telecommunications
22-Dec-2016	BDI Beteiligungs GmbH	Austria	14.20	BDI - BioEnergy International AG	Austria	Industrial Machinery
22-Dec-2016	DBAY Advisors Ltd.	United Kingdom	59.77	Creston Plc	United Kingdom	Miscellaneous Commercial Services
22-Dec-2016	3D Systems Europe Ltd.	United Kingdom	3.83	Phenix Systems SAS	France	Information Technology Services
22-Dec-2016	Deutsche Post AG	Germany	298.99	UK Mail Group Plc	United Kingdom	Air Freight/Couriers
21-Dec-2016	Dimesilia Holdings Ltd.	Cyprus	11.24	RusForest AB	Sweden	Forest Products
20-Dec-2016	Molkerei Alois Müller GmbH & Co. KG; Sachsenmilch Anlagen Holding GmbH	Germany	13.17	Sachsenmilch AG	Germany	Miscellaneous Commercial Services
16-Dec-2016	OVS SpA; Aspen Trust Services Ltd.; Sempione Retail AG; Retails Investment S.R.L.	Italy; Switzerland; Italy	191.73	Charles Vögele Holding AG	Switzerland	Apparel/Footwear Retail
15-Dec-2016	Harwood Private Equity; Harwood Capital LLP;	United Kingdom	20.81	Journey Group Plc	United Kingdom	Restaurants

	Vanguard Energy Group Ltd.					
15-Dec-2016	Friars 716 Ltd.	United Kingdom	21.21	SWP Group Plc	United Kingdom	Financial Conglomerates
14-Dec-2016	Cenergy Holdings SA	Belgium	20.04	Corinth Pipeworks Holdings SA	Greece	Steel
14-Dec-2016	Evotec AG	Germany	51.09	Cyprotex Plc	United Kingdom	Miscellaneous Commercial Services
13-Dec-2016	AFG Arbonia-Forster-Holding AG	Switzerland	177.38	Looser Holding AG	Switzerland	Industrial Specialties
12-Dec-2016	Augment Investments Ltd.	Cyprus	10.84	Pharmstandard PJSC	Russian Federation	Pharmaceuticals: Major
09-Dec-2016	Solstad Offshore ASA /Old/	Norway	2.29	REM Offshore ASA	Norway	Finance/Rental/Leasing
09-Dec-2016	Transocean Ltd.	Switzerland	255.07	Transocean Partners LLC	United Kingdom	Contract Drilling
28-Nov-2016	Abris Capital Partners Sp zoo	Poland	56.27	Graal SA	Poland	Food: Meat/Fish/Dairy
18-Nov-2016	BINBANK OAO; Darrington Enterprises Ltd.	Russian Federation; Cyprus	31.61	MDM Bank PJSC	Russian Federation	Major Banks
17-Nov-2016	Comfort Enterprise (Germany) GmbH	Germany	1.25	Medisana AG	Germany	Medical Specialties
07-Nov-2016	Verizon Business International Holdings BV	Netherlands	1,956.67	Fleetmatics Group Plc	Ireland	Packaged Software
02-Nov-2016	Nokia Oyj	Finland	579.20	Alcatel-Lucent SAS	France	Major Telecommunications
28-Oct-2016	AVAST Software SRO	Czech Republic	1,246.60	AVG Technologies NV	Netherlands	Packaged Software
28-Oct-2016	HgCapital LLP	United Kingdom	4.69	Commify Italia SPA	Italy	Advertising/Marketing Services
27-Oct-2016	Lerøy Seafood Group ASA	Norway	108.44	Havfisk ASA	Norway	Agricultural Commodities/Milling
27-Oct-2016	Lerøy Seafood Group ASA	Norway	2.40	Norway Seafoods Group AS	Norway	Food Distributors
14-Oct-2016	MERLIN Properties SOCIMI SA	Spain	1.24	Testa Inmuebles en Renta SA	Spain	Real Estate Development
12-Oct-2016	HeidelbergCement AG	Germany	4,341.29	Italcementi Fabbriche Riunite Cemento SpA	Italy	Construction Materials
05-Oct-2016	Zimmer Holdings France SAS	France	48.97	Medtech SAS	France	Electronic Equipment/Instruments
05-Oct-2016	Perella Weinberg Partners LP; Aermont Capital LLP	United States	481.04	Pinewood Group Plc	United Kingdom	Movies/Entertainment
04-Oct-2016	Anheuser-Busch InBev SA /Old/	Belgium	109,440.58	SABMiller Plc	United Kingdom	Beverages: Alcoholic
30-Sep-2016	Ardian SA; Hutton Collins Partners LLP; Dedalus SpA; Mandarin Capital Management SA	France; United Kingdom; Italy; Luxembourg	10.36	Noemalife SpA	Italy	Packaged Software
26-Sep-2016	News Corp. UK & Ireland Ltd.	United Kingdom	265.36	Wireless Group Plc	United Kingdom	Broadcasting
23-Sep-2016	R&S Retail Group NV	Netherlands	204.78	FNG Group NV	Belgium	Apparel/Footwear Retail
22-Sep-2016	EQT Partners AB	Sweden	168.21	Industrial & Financial Systems AB	Sweden	Information Technology Services
22-Sep-2016	Eurazeo PME SA; Financière Orolia SAS	France	9.91	Orolia SAS	France	Aerospace & Defense

21-Sep-2016	AQA Education	United Kingdom	6.99	DRS DATA AND RESEARCH SERVICES PLC	United Kingdom	Computer Peripherals
20-Sep-2016	FIATC Mutua de Seguros y de Reaseguros APF	Spain	8.99	Inverfiatc SA	Spain	Medical/Nursing Services
19-Sep-2016	Groupe Lactalis SA	France	22.45	Albalact SA	Romania	Food: Meat/Fish/Dairy
16-Sep-2016	Steinhoff International Holdings NV	Netherlands	586.56	Poundland Group Ltd.	United Kingdom	Discount Stores
15-Sep-2016	Harwood Private Equity; Harwood Capital LLP; Continental Investment Partners SA; Source Bioscience Plc /Private Group/	Switzerland; United Kingdom	61.13	Source BioScience Plc	United Kingdom	Medical/Nursing Services
15-Sep-2016	Inflection Management Corp. Ltd.	Cyprus	9.52	Superglass Holdings Ltd.	United Kingdom	Home Furnishings
12-Sep-2016	Groupe FNAC SA	France	1,437.09	Darty Plc	United Kingdom	Electronics/Appliance Stores
07-Sep-2016	Tsesnabank JSC	Kazakhstan	3.44	Plus Bank OJSC	Russian Federation	Regional Banks
07-Sep-2016	Currie & Brown Holdings Ltd.	United Kingdom	51.33	Sweett Group Ltd.	United Kingdom	Miscellaneous Commercial Services
01-Sep-2016	J Sainsbury Plc	United Kingdom	1,497.31	Home Retail Group Ltd.	United Kingdom	Department Stores
29-Aug-2016	Cinetic Gesellschaft zur Entwicklung & Vertrieb von Medien	Germany	8.46	Atevia AG	Germany	Internet Software/Services
25-Aug-2016	Grimaldi Euromed SpA	Italy	18.09	Finnlines Oyj	Finland	Air Freight/Couriers
22-Aug-2016	BINBANK OAO	Russian Federation	0.31	Tveruniversalbank OAO	Russian Federation	Regional Banks
15-Aug-2016	Hanover Investors Management LLP	United Kingdom	27.01	Hydro International Ltd. (United Kingdom)	United Kingdom	Water Utilities
12-Aug-2016	Total SA	France	996.26	Saft Groupe SA	France	Electrical Products
05-Aug-2016	Mylan NV	United Kingdom	8,771.19	Meda AB	Sweden	Pharmaceuticals: Major
02-Aug-2016	RPC Group Plc	United Kingdom	382.40	British Polythene Industries Ltd.	United Kingdom	Containers/Packaging
31-Jul-2016	MK Group doo	Serbia	12.47	AIK Banka AD Niš	Serbia	Regional Banks
23-Jul-2016	Royal Ahold NV	Netherlands	10,079.64	Delhaize Group SA	Belgium	Food Retail
14-Jul-2016	Davide Campari-Milano SpA	Italy	330.32	Société des Produits Marnier Lapostolle SA	France	Beverages: Alcoholic
14-Jul-2016	Xvivo Perfusion AB	Sweden	9.99	Vivoline Medical AB	Sweden	Medical Specialties
13-Jul-2016	3i Group Plc; 3i Investments Plc; Layout Bidco A/S	United Kingdom; Denmark	188.19	BoConcept Holding A/S	Denmark	Specialty Stores
01-Jul-2016	Apax Partners LLP; Neuberger Berman Group LLC	United Kingdom; United States	459.50	Engineering Ingegneria Informatica SpA	Italy	Packaged Software
01-Jul-2016	NTT DoCoMo, Inc.; DOCOMO Digital GmbH	Japan; Germany	3.36	net mobile AG	Germany	Specialty Telecommunications
29-Jun-2016	Hyster-Yale Capital Holding Italy SRL	Italy	41.96	Bolzoni SpA	Italy	Trucks/Construction/Farm Machinery
29-Jun-2016	Virom Group doo; South Frontier doo; Rafinerija Nafte Ad /Private Group/	Serbia	0.80	Rafinerija Nafte AD	Serbia	Industrial Specialties

24-Jun-2016	Gilde Investment Management BV; Todlin NV; Teslin Capital Management BV; Gilde Buy-Out Partners BV; Navitas Management BV; Navitas Management Fund; Royal Reesink NV /Private Group/	Netherlands	208.32	Royal Reesink BV	Netherlands	Wholesale Distributors
22-Jun-2016	QIAGEN NV	Netherlands	89.22	Exiqon A/S	Denmark	Miscellaneous Commercial Services
13-Jun-2016	Italiaonline SpA /Old/; Libero Acquisition SARL	Italy; Luxembourg	58.27	Seat Pagine Gialle SpA	Italy	Commercial Printing/Forms
10-Jun-2016	Government of Russia; Federal Hydro-Generating Co. RusHydro PJSC; East-Finance LLC	Russian Federation	28.11	RAO Energy System of East PJSC	Russian Federation	Electric Utilities
10-Jun-2016	Vectura Group Plc	United Kingdom	499.82	SkyePharma Plc	United Kingdom	Pharmaceuticals: Other
03-Jun-2016	Centerbridge Partners LP; Mediona Sp zoo	United States; Poland	105.50	Magellan SA	Poland	Financial Conglomerates
19-May-2016	Penta Capital LLP; Toscafund Asset Management LLP; InternetQ Plc /Private Group/	United Kingdom	44.20	InternetQ Plc	United Kingdom	Miscellaneous Commercial Services
19-May-2016	EQT Partners AB	Sweden	1,216.73	Kuoni Reisen Holding AG	Switzerland	Other Consumer Services
16-May-2016	Liberty Global Plc	United Kingdom	7,153.35	Cable & Wireless Communications Plc	United Kingdom	Specialty Telecommunications
10-May-2016	Olsten (U.K.) Holdings Ltd.	United Kingdom	115.75	Penna Consulting Ltd.	United Kingdom	Miscellaneous Commercial Services
09-May-2016	Tangent Communications Plc /Management/	United Kingdom	7.80	Tangent Communications Plc	United Kingdom	Miscellaneous Commercial Services
04-May-2016	Foliateam SASU; Bpifrance Participations SA /PRIVATE EQUITY/	France	0.46	Acropolis Telecom SA	France	Specialty Telecommunications
04-May-2016	Bonheur ASA	Norway	55.98	Ganger Rolf ASA	Norway	Marine Shipping
29-Apr-2016	Goldcup 12279 AB	Sweden	1.09	Agellis Group AB	Sweden	Electronic Equipment/Instruments
14-Apr-2016	LGT Capital Partners AG; LGT Group Foundation; Danske Koncept Restauranter Holding ApS; Etib Holding II AB; Beckett Sec Ltd.; Amcon Invest ApS; Ventiga Capital Partners LLP	Switzerland; Liechtenstein; Denmark; Sweden; Ireland; Denmark; United Kingdom	50.13	Nordic Service Partners Holding AB	Sweden	Restaurants
08-Apr-2016	Government of Finland; Fortum Oyj	Finland	110.93	Grupa Duon SA	Poland	Gas Distributors
04-Apr-2016	Permira Holdings Ltd.; Just Retirement Group Plc	United Kingdom	1,032.59	Partnership Assurance Group Plc	United Kingdom	Life/Health Insurance
01-Apr-2016	Endress+Hauser (Deutschland) AG+Co. KG	Germany	8.38	Analytik Jena AG	Germany	Medical Specialties
31-Mar-2016	Enel SpA	Italy	3,259.44	Enel Green Power SpA	Italy	Electric Utilities
31-Mar-2016	Cathexis UK Holdings Ltd.	United Kingdom	6.94	ISG Central Services Ltd.	United Kingdom	Engineering & Construction
31-Mar-2016	voestalpine Vae GmbH	Austria	0.86	voestalpine VAE APCAROM SA	Romania	Trucks/Construction/Farm Machinery

30-Mar-2016	MultiQ International AB	Sweden	0.14	Mermaid AS	Denmark	Computer Peripherals
29-Mar-2016	Mediosmanagement GmbH	Germany	0.23	CREVALIS Capital AG	Germany	Medical Distributors
24-Mar-2016	Government of Russia; Bashneft PJSOC	Russian Federation	46.07	Ufaorgsintez PJSC	Russian Federation	Chemicals: Specialty
18-Mar-2016	Oddo & Cie SCA	France	596.37	BHF Kleinwort Benson Group SA	Belgium	Investment Managers
18-Mar-2016	Lafarge Cementos SAU	Spain	9.63	Heracles General Cement Co. SA	Greece	Construction Materials
17-Mar-2016	ING Groep NV; Gilde Investment Management BV; Parcom Capital Management BV; Gilde Buy-Out Partners BV; ABN AMRO Participaties Management BV; ABN AMRO Group NV; Royal Ten Cate NV /Private Group/	Netherlands	931.70	Royal Ten Cate NV	Netherlands	Textiles
15-Mar-2016	Baronsmead VCT 3 Plc	United Kingdom	95.09	Baronsmead VCT 4 Plc	United Kingdom	Investment Managers
15-Mar-2016	Siberian Coal Energy Co. JSC; Madake Enterprises Co. Ltd.; Suek Plc	Russian Federation; Cyprus	9.90	Primorskugol JSC	Russian Federation	Coal
14-Mar-2016	Alychlo NV; Wildo Properties SA; Perennitas SA	Belgium	25.23	Pairi Daiza NV	Belgium	Other Consumer Services
09-Mar-2016	Den Hartogh Holding BV	Netherlands	130.42	InterBulk Group Ltd.	United Kingdom	Air Freight/Couriers
04-Mar-2016	Sabeton SA	France	0.29	Compagnie Agricole de la Crau SA	France	Wholesale Distributors
01-Mar-2016	Fairfax Financial Holdings Ltd.; ACON Investments LLC; Albright Capital Management LLC; APR Energy Plc /Private Group/	Canada; United States; United Kingdom	668.49	APR Energy Ltd.	United Kingdom	Electric Utilities
26-Feb-2016	Viohalco SA/NV	Belgium	222.45	ELVAL Holdings SA	Greece	Aluminum
25-Feb-2016	Aarhus University Research Foundation	Denmark	0.33	Auriga Industries A/S	Denmark	Chemicals: Agricultural
25-Feb-2016	Renaissance Construction A.S.	Russian Federation	1.42	Ballast Nedam NV	Netherlands	Engineering & Construction
22-Feb-2016	Catena AB	Sweden	476.16	Tribona AB	Sweden	Real Estate Development
22-Feb-2016	CORESTATE Capital AG; Corestate Ben BidCo AG	Switzerland; Germany	1.38	Youniq AG	Germany	Real Estate Development
19-Feb-2016	Randstad Nordic AB	Sweden	192.09	Proffice AB	Sweden	Personnel Services
16-Feb-2016	Argos Soditic SA; Partners in Action SA	Switzerland; France	14.62	EFESO Consulting SA	France	Miscellaneous Commercial Services
15-Feb-2016	Royal Dutch Shell Plc	Netherlands	74,734.72	BG Group Plc	United Kingdom	Oil & Gas Production
12-Feb-2016	Ilim Timber Industry LLC	Russian Federation	49.52	Ust-Ilimskiy LDZ	Russian Federation	Pulp & Paper
08-Feb-2016	Altice NV; Groupe News Participations SAS	Netherlands; France	300.25	NextRadioTV SA	France	Broadcasting
05-Feb-2016	Government of Russia; VTB Bank PJSC; Federal Agency for State Property Management	Russian Federation	70.90	Bank of Moscow OJSC	Russian Federation	Major Banks

02-Feb-2016	Paddy Power Plc	Ireland	2,936.68	Betfair Group Plc	United Kingdom	Internet Software/Services
01-Feb-2016	Amaya, Inc.; GVC Holdings Plc	Canada; United Kingdom	1,303.20	bwin.party digital entertainment Plc	Gibraltar	Media Conglomerates
27-Jan-2016	Octopus Apollo VCT Plc	United Kingdom	20.43	Octopus VCT 2 Plc	United Kingdom	Investment Managers
21-Jan-2016	DIAS Publishing House Ltd.; Kronos Press Agency Public Co. Ltd. /Private Group/; Phileleftheros PCL	Cyprus	0.41	Kronos Press Agency Public Co. Ltd.	Cyprus	Wholesale Distributors
21-Jan-2016	Euromin Holdings (Cyprus) Ltd.; Vitol R&M SA	Cyprus; Switzerland	32.22	Ventspils Nafta AS	Latvia	Marine Shipping
18-Jan-2016	Rockhopper Exploration Plc	United Kingdom	43.72	Falkland Oil & Gas Ltd.	United Kingdom	Oil & Gas Production
12-Jan-2016	Unicorn Asset Management Ltd.; Unicorn AIM VCT Plc	United Kingdom	13.30	Rensburg AIM VCT Plc	United Kingdom	Investment Managers
11-Jan-2016	Sigvaris Holding AG	Switzerland	1.64	Pani Teresa Medica SA	Poland	Medical Distributors
08-Jan-2016	Axios Bidco Ltd.	United Kingdom	603.18	The Innovation Group Ltd.	United Kingdom	Miscellaneous Commercial Services
06-Jan-2016	Balfour Beatty Infrastructure Partners LLP; Balfour Beatty Investment Holdings Ltd.	United Kingdom	106.58	Alkane Energy Ltd.	United Kingdom	Electric Utilities
31-Dec-2015	Asseco Poland SA	Poland	32.19	Infovide Matrix SA	Poland	Information Technology Services
30-Dec-2015	VP Exploitatie NV	Netherlands	23.64	Batenburg Techniek NV	Netherlands	Electronic Equipment/Instruments
28-Dec-2015	William Demant Holding A/S; The Oticon Foundation	Denmark	7.73	Audika Groupe SAS	France	Medical Distributors
23-Dec-2015	Beko Beteiligungsvervaltung OG	Germany	5.15	Beko Holding AG	Austria	Information Technology Services
23-Dec-2015	Établissements Maurel & Prom SA	France	215.59	MPI SA	France	Oil & Gas Production
22-Dec-2015	Volution Group Plc	United Kingdom	10.87	Energy Technique Plc	United Kingdom	Oilfield Services/Equipment
21-Dec-2015	Deutsche Bank AG	Germany	245.41	Deutsche Postbank AG	Germany	Major Banks
18-Dec-2015	Foresight VCT Plc	United Kingdom	58.50	Foresight 2 VCT Plc	United Kingdom	Investment Managers
18-Dec-2015	Delphi Automotive Plc	United Kingdom	1,653.17	HellermannTyton Group Plc	United Kingdom	Electrical Products
17-Dec-2015	Tequity AB; Viltor AB	Sweden	34.28	Cybercom Group AB	Sweden	Information Technology Services
17-Dec-2015	Monterey Capital II SARL	Luxembourg	237.84	Infinis Energy Ltd.	United Kingdom	Electric Utilities
14-Dec-2015	Siparex Proximité Innovation SAS; Re-Sources 1 SASU; Imprimerie Jean-Bernard SASU; H.G.D. Participations SAS	France	1.64	Schaeffer Dufour SA	France	Investment Managers
03-Dec-2015	FGC Finanziaria SRL	Italy	83.70	Vianini Lavori SpA	Italy	Engineering & Construction
02-Dec-2015	Mitterbauer Beteiligungs-AG	Austria	68.50	Miba AG	Austria	Metal Fabrication
01-Dec-2015	Dimco Plc /Management/	Cyprus	1.07	Dimco Plc	Cyprus	Electrical Products

28-Nov-2015	Cordiant JSC	Russian Federation	1.90	Cordiant JSC (Yaroslavl)	Russian Federation	Automotive Aftermarket
26-Nov-2015	Saverco NV	Belgium	278.95	Compagnie Maritime Belge SA	Belgium	Airlines
24-Nov-2015	Rostelecom Long-Distance & Intl Telecommunications Co. PJSC	Russian Federation	3.65	Bashinformsvyaz PJSC	Russian Federation	Specialty Telecommunications
17-Nov-2015	Sacturino Ltd.	United Kingdom	5,192.08	Polyus Gold International Ltd.	United Kingdom	Precious Metals
16-Nov-2015	Eurasia Drilling Co. Ltd. /Private Group/	Russian Federation	445.35	Eurasia Drilling Co. Ltd.	Russian Federation	Contract Drilling
10-Nov-2015	Quixant Plc	United Kingdom	12.82	Densitron Technologies Plc	United Kingdom	Electronic Production Equipment
09-Nov-2015	Dufry Financial Services BV	Netherlands	1,301.81	World Duty Free SRL	Italy	Specialty Stores
06-Nov-2015	Camfin SpA; Rosneft; Government of China; China National Chemical Corp.; Intesa Sanpaolo SpA; UniCredit SpA; China National Tire & Rubber Co., Ltd.; Lauro Sessantuno SpA; Long-term Investments Luxembourg SA; Marco Polo Industrial Holding SpA	Italy; Russian Federation; China; Luxembourg	6,363.97	Pirelli & C. SpA	Italy	Automotive Aftermarket
23-Oct-2015	LafargeHolcim Ltd.	Switzerland	638.29	Lafarge SA	France	Construction Materials
16-Oct-2015	Providence Equity Partners LLC; Providence Equity Partners, Inc.; WPP Plc; Chime Communications Plc /Private Group/	United States; United Kingdom	512.94	Chime Communications Plc	United Kingdom	Miscellaneous Commercial Services
15-Oct-2015	Solix Group AB	Sweden	7.32	Aktiebolaget Geveko	Sweden	Wholesale Distributors
15-Oct-2015	ICA Gruppen AB; ICA-handlarnas Förbund AB	Sweden	23.59	Hemtex AB	Sweden	Wholesale Distributors
01-Oct-2015	Sweco AB	Sweden	379.11	Grontmij NV	Netherlands	Engineering & Construction
30-Sep-2015	Telecom Italia SpA	Italy	15.76	Telecom Italia Media SpA	Italy	Commercial Printing/Forms
29-Sep-2015	Qino Capital Partners AG; Swissburg AG	Switzerland	15.40	Qino Flagship AG	Switzerland	Financial Conglomerates
28-Sep-2015	Southbank Media Ltd.	United Kingdom	771.36	TVN SA	Poland	Broadcasting
25-Sep-2015	Bentley Park Ltd.	United Kingdom	53.92	Inspired Capital Plc	United Kingdom	Finance/Rental/Leasing
17-Sep-2015	Edenred France SAS; SECAFI Changement Travail Santé SAS; PwCE Participations SASU	France	4.83	ProWebCE SA	France	Packaged Software
16-Sep-2015	Lagardère Active SAS	France	4.66	LeGuide.com SA	France	Internet Software/Services
15-Sep-2015	Sky German Holdings GmbH	Germany	228.63	Sky Deutschland AG	Germany	Cable/Satellite TV
14-Sep-2015	Münchener Rückversicherungs-Gesellschaft AG	Germany	4.88	Forst Ebnath AG	Germany	Forest Products
11-Sep-2015	Vivendi SA; Groupe CANAL+ SA	France	395.22	Société d'Edition de Canal Plus SA	France	Broadcasting

04-Sep-2015	Hardstaff Dual Fuel Technology Ltd.	United Kingdom	0.34	Clean Air Power Ltd.	United Kingdom	Auto Parts: OEM
04-Sep-2015	International Hotel Investments Plc; Corinthia Palace Hotel Co. Ltd.	Malta	105.65	Island Hotels Group Holdings plc	Malta	Hotels/Resorts/Cruiselines
24-Aug-2015	Kompania Górnicza Sp zoo	Poland	118.38	Dolnoslaskie Surowce Skalne Sp zoo	Poland	Other Metals/Minerals
21-Aug-2015	Banco de Sabadell SA	Spain	2,121.06	TSB Banking Group Plc	United Kingdom	Regional Banks
20-Aug-2015	Ferrero International SA; Ferholding UK Ltd.	Luxembourg; United Kingdom	180.95	Thorntons Plc	United Kingdom	Food: Specialty/Candy
14-Aug-2015	Capital Holding SIA	Latvia	0.14	Rigas Pharmaceutical Factory JSC	Latvia	Pharmaceuticals: Major
13-Aug-2015	Keysight Technologies Netherlands BV	Netherlands	476.47	Anite Plc	United Kingdom	Information Technology Services
07-Aug-2015	Harwood Capital LLP; Harwood Bidco Ltd.; Indoor Bowling Equity Ltd.	United Kingdom	62.27	Essenden Plc	United Kingdom	Media Conglomerates
07-Aug-2015	Lagardère Active SAS	France	2.92	Lagardère Active Broadcast	Monaco	Broadcasting
04-Aug-2015	DM Grain-Corn doo	Serbia	2.01	Luka Dunav AD	Serbia	Other Transportation
31-Jul-2015	Westland Horticulture Ltd.	United Kingdom	51.49	William Sinclair Holdings Plc	United Kingdom	Chemicals: Agricultural
30-Jul-2015	Boursorama SA	France	0.76	OnVista AG	Germany	Internet Software/Services
28-Jul-2015	KUKA Beteiligungen (Schweiz) AG	Switzerland	12.74	Swisslog Holding AG	Switzerland	Information Technology Services
23-Jul-2015	1Spatial Plc	United Kingdom	2.38	ENABLES IT GROUP PLC	United Kingdom	Information Technology Services
22-Jul-2015	Viohalco SA/NV	Belgium	29.81	Sidenor Holdings SA	Greece	Steel
17-Jul-2015	Daisy Group Ltd.	United Kingdom	251.64	Phoenix IT Group Plc	United Kingdom	Information Technology Services
13-Jul-2015	Circassia Pharmaceuticals Plc	United Kingdom	170.70	Aerocrine AB	Sweden	Electronic Equipment/Instruments
13-Jul-2015	Scanfil Oyj	Finland	75.71	PartnerTech AB	Sweden	Electrical Products
10-Jul-2015	ING Groep NV; Riva Investments BV; Marsala BV; Florijn Investments BV; Stichting Administratiekantoor WAN; J.G.H.M. Niessen; International Media Solutions BV	Netherlands	1.76	Roto Smeets Group NV	Netherlands	Commercial Printing/Forms
30-Jun-2015	HitecVision Private Equity AS; HV VII Invest Manna II AS	Norway	16.66	Rocksource ASA	Norway	Oilfield Services/Equipment
29-Jun-2015	AEVIS Holding SA	Switzerland	27.99	Victoria-Jungfrau Collection AG	Switzerland	Hotels/Resorts/Cruiselines
26-Jun-2015	Xtrackers (IE) PLC; Xtrackers FTSE All-World ex UK UCITS ETF	Ireland	45.06	db x-trackers FTSE All-World ex UK UCITS ETF	Luxembourg	Investment Trusts/Mutual Funds
26-Jun-2015	Xtrackers (IE) PLC; Xtrackers S&P 500 Equal Weight UCITS ETF	Ireland	31.11	db x-trackers S&P 500 Equal Weight UCITS ETF	Luxembourg	Investment Trusts/Mutual Funds
15-Jun-2015	Madake Enterprises Co. Ltd.; Suek Plc	Cyprus	2.63	Primorskugol JSC	Russian Federation	Coal

09-Jun-2015	English Rose Enterprises Ltd.	United Kingdom	25.88	Beale Plc	United Kingdom	Department Stores
27-May-2015	Kofola a.s.; KSM Investment SA	Czech Republic; Luxembourg	4.14	RADENSKA doo	Slovenia	Beverages: Non-Alcoholic
22-May-2015	E & Funktionstechnik Holding AG	Germany	4.89	EHLEBRACHT AG	Germany	Miscellaneous Manufacturing
19-May-2015	CoSine Communications, Inc.; Cedar 2015 Ltd.	United States; United Kingdom	47.06	API Group Plc	United Kingdom	Containers/Packaging
07-May-2015	Palamon Capital Partners LP; Quilvest & Partners SA; Towry Finance Co. Ltd.	Luxembourg; United Kingdom	164.85	ASHCOURT ROWAN PLC	United Kingdom	Investment Managers
30-Apr-2015	NCC Group Plc	United Kingdom	69.08	Accumuli Plc	United Kingdom	Information Technology Services
14-Apr-2015	Nordeka JSC /Savickis/	Latvia	0.11	Nordeka AS	Latvia	Hotels/Resorts/Cruiselines
02-Apr-2015	Matchtech Group Plc	United Kingdom	84.13	Networkers International (UK) Ltd.	United Kingdom	Personnel Services
30-Mar-2015	MOL Hungarian Oil & Gas Plc	Hungary	19.50	Mol Petrolkémia Zrt.	Hungary	Chemicals: Specialty
21-Mar-2015	Atine Group Oy	Finland	1.44	Turvatiimi Oyj	Finland	Miscellaneous Commercial Services
13-Mar-2015	Project Panther Bidco Ltd.	United Kingdom	42.44	Aspiro AB	Sweden	Packaged Software
23-Feb-2015	Ostrc doo	Slovenia	9.14	Dalmacijavino dd	Croatia	Beverages: Alcoholic
19-Jan-2015	Fraport AG Frankfurt Airport Services Worldwide	Germany	4.72	Aerodrom Ljubljana dd	Slovenia	Other Transportation